THE LANGUAGE OF INVECTIVE IN JONATHAN SWIFT'S GULLIVER'S TRAVELS

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Swift's Gulliver's Travels, falling within the comic range of man, is a classic example of the use of invective. Invective, apart from being a semantic attack on man, totally, may be tested for its occurrence phonologically. If this is a correct assumption, then the phonological weight should be sustained and heavy in conjunction with smashing semantic tones. There should be a preponderance of ugly or negative phonemes above the normally-expected occurrence in the English language.

In order to determine whether this is a valid hypothesis, two tests are employed: first, that of Robson's The Orchestra of the Language and, next, Williams' "Beauty of Style." These works serve as the criteria. Robson's work makes the analogy among speech sounds and the instruments of the orchestra. In so doing, the work indicates

phonemic striking power and time duration; dividing the former by the latter yields intensity. The numerical scale, one of a relative span between 1-30 is employed on quotations from Gulliver's Travels.

The net result of 100+ reveals an intensity well above a normal intensity of ±70. It is possible to find significant differences among wit, invective, and satire.

The second standard used is that of determining an increased usage of ugly, negative, or unpleasant phonemes, as indicated in Williams' work.

There is found an appreciable number of phonemes, both vowels and consonants, above the expected range of that which is "negative," "flat," or "dull." Dewey's A Relative Frequency of English Speech Sounds is used as a norm to which the observed number found in the quotations is compared.

The results reveal intensities corresponding with the semantic tones found in the randomly-selected tones in Gulliver's Travels and with the operational definition assigned to invective.

There is a correlation between the intensities found and the increased occurrence of phonemes in the "ugly," "dull," or "negative" ranges. It is concluded

that the language of invective is revealed in Gulliver's Travels through solid phonological evidence.

Accepted by:

_____, Chairman

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THE LANGUAGE OF INVECTIVE IN JONATHAN SWIFT'S GULLIVER'S TRAVELS

A Monograph

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Chapter 1

NATURE OF THE MONOGRAPH, PROCEDURE, PURPOSE AND SPECIFIC ELEMENTS TO BE PROVEN, DEFINITIONS, AND PREVIOUS WORK IN THE FIELD

NATURE OF THE MONOGRAPH

The purpose of this monograph is to consider the use of invective in the language of Jonathan Swift in his Gulliver's Travels. The nature of this work is descriptive and analytical. No judgment is passed as to whether Swift should have used the techniques of comedy that he used, because, in this monograph, few value judgments are being made on his work and language. There is no question regarding the fact that Gulliver's Travels is well within the comic range of man. There is also no question that the work is of a satiric nature, in its general and specific criticisms of mankind.

Because "satire" is often used in a dual sense, it is considered necessary to define its sense for this treatment. It is considered that satire is the art or process of arousing laughter at man's nature and at his

handling of his institutions. Satire is considered as that which is represented through three different types as to content and method. There is the light, gentle, and playful satire, which is critical but sympathetic. Then there is the vicious but swift, dazzling rapier-like thrusts which aim to paralyze whenever they strike. The latter type often focuses on specific events, specific persons, or specific flaws in institutions. Still another type is that of the brutal axe-like stunning blows of a heavy and indiscriminate satire. Because the attack is so general, complete, and massive, there appears to be little need for attempting to reform or change since there is very little left for an individual's insight into his failings or flaws.

In this monograph, no attempt is made to deal with the more or less traditional definition of satire which suggests that the art of satire is directed toward man's reformation as a result of his being ridiculed. The matters of motive, cause, and effect are difficult to handle; because if there is an admitted desire to use satire for reform, there is, however, no evidence that the victim will reform. He may see the satirist as a person to be avoided rather than one from whom useful

direction may be received. To the contrary, a vicious intent of the satirist--one of lashing for the sheer pleasure of watching the victim squirm--may result in reformation even though that was not his original purpose. Therefore, in this monograph, the question of intent or motive will not receive major attention.

Satire is often used in another manner, Fowler's definition[1] of the tools of comedy puts satire in with a group of other tools of comedy: humor, wit, sarcasm, invection, irony, and cynicism. In this classification, each tool is considered from the viewpoints of the headings "Motive," "Province," "Method or Means," and "Audience." I will not consider satire as a tool but as a method of comedy. Instead, comedy will be viewed as a critical evaluation of man on this horizontal or temporal world. Satire will be considered as a method for directing attention to man's earthly inadequacies. Invective will be viewed as one of the tools of satire. Later, in this chapter, it will be indicated that other tools of satire are present in the language of Swift. This point will be discussed in the section on "Definition." Invective will

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[1]H. W. Fowler, A Dictionary of Modern English Usage (New York: Oxford University Press, 1965).

be considered, specifically, with regard to its measurement in word tone, phrase tone, and sentence-or-greater tone. In addition to defining the tools of satire, definition will be made in order that tones of invective may be distinguished from other tools. The basis for this discrimination will come from Robson's The Orchestra of the Language,[2] and from Williams' Creative Writing.[3] Following the section on "Procedure" will be that of "Purpose and Specific Elements to be Proven."

PROCEDURE

This monograph is developed through seven chapters. Chapter One carries the nature of the work through emphasizing that the monograph is descriptive and that it is analytical. Interpretations are made on the basis of semantic and phonological descriptions of phonemic sound combinations.

Chapter One also indicates how this work is to be carried out as to method and technique. The chapter also

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[2]Ernest Robson, The Orchestra of the Language (New York: Yoseloff, 1969).

[3]George Williams, Creative Writing (New York: Harper, 1954).

carries statements concerning work done in the field previously. The framework for the sequence of the following five chapters is indicated specifically.

Chapter Two indicates the detail of the sound sequences and examples of their employment in measuring the language in Gulliver's Travels. Further, examples from the passages are directed specifically to Williams' "Beauty of Style" with relation to vowel and consonantal sound-patterning. This critical chapter includes the information which will constitute the basic work in the following chapters.

Chapters Three, Four, Five, and Six are each treated distinctly. Chapter Three is concerned with the first voyage of Gulliver; Chapter Four, with the second voyage; Chapter Five; with the third voyage, and, finally, Chapter Six with the fourth and final voyage. The first part of each chapter is concerned with the nature of the voyage. The second part is concerned with the general semantic overt nature of the invective, and the third part with the examples of the language of invective as determined phonologically.

Chapter Seven constitutes the summary with certain analyses of differences among the middle chapters. This

final chapter relates the total nature of the findings and the possible use, information, method, and techniques that can be employed further.

PURPOSE AND SPECIFIC ELEMENTS TO BE PROVEN

The purpose of this monograph is to discover and to point to the incidence of invective in Jonathan Swift's Gulliver's Travels.[4] The incidence is to be viewed from the total semantic impacts of certain statements and from phonemic construction and overtones of words, phrases, clauses, and greater-than-sentence-units used by Swift. If the incidence is appreciable, and if the techniques for discriminating language in reference to other tools of satire are relatively simple and reasonably reliable, suggestions will be made concerning the feasibility of their use in other literary analysis or literary criticism.

The elements to be proven are first, that there is an area of emotive evocation that is linked to the constituents of elements of language; secondly, that there are signals or markers which point to such linguistic tools; and, thirdly, that there is a consistency in the

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[4]Jonathan Swift, Gulliver's Travels (Boston: Houghton Mifflin, 1960).

word associations so strong as to rest upon sensitive psychological and philosophical principles. If there is a useful correlation between Robson's work written for the writer, and Williams' Creative Writing as it relates to "Beauty of Style," then the results derived from Gulliver's Travels will be supported by reliable measuring instruments.

DEFINITIONS

For the purpose of this monograph, certain key words will be defined as closely as possible, because certain words or phrases may carry more than one meaning to the reader; or they may not be known by the reader in any sense.

First, satire will be defined, as was indicated earlier, as a tool of comedy which is stated as a critical way of viewing man's conduct temporally. Consider that comedy embraces the total behavior of man in its concern with earthly behavior; therefore, in comedy, eschatology is excluded entirely as a serious and real concern. (Eschatology refers to the doctrine of last things in preparation for the next world or an eternal world--a world where sin, evil, pain, and punishment are considered against good, joy, rewards, and heaven, for example.)

Comedy is considered with respect to man's illusions and delusions, and with the belief that he is essentially pessimistic. Man is condemned either to fool or be fooled. He suffers from the life-irony of never being able to see a true situation at any time ahead to which he directs or commits his energies--no matter how wisely or ill-advisedly. He operates by pretending that what is not so really is so; or, more sadly, he suffers from deluding himself into believing that what is not true really is true. If given the choice of aspiration over pretence, he prefers pretence.

Without further details regarding these types, I point out that for this monograph, concern is limited to "pure comedy." In this comedy, all that happens to the comic figure is the result of his own delusions or illusions. His mishaps do not spring from accident, but from defects in his own character. It is a sort of "high" comedy, or social comedy, or political comedy. (It is recognized, that in comedy there is always the accidental, in which the pessimistic strain of comedy has one of its roots.) However, for this purpose, what happens in Gulliver's Travels is that which comes from the characters of the individuals and from the character of man, as man.

This comedy is carried primarily through satire, a method which operates through arousing laughter at man and at individual men for their actions or inactions. The gentle and playful type of satire found in such words as those of Stephen Leacock or in some Chaucer is not often present in Swift. The decapitating satiric stroke more common to Alexander Pope is quite rarely an occurrence. The heavy and massive total condemnation of the third type is the type most often found in Swift, and in Gulliver's Travels.

For this monograph, humor, wit, invective, irony, cynicism, and sardonicism, are included as the tools of satire. Humor is defined, both psychologically and semantically, as a way of revealing incongruities among men or situations with no attempt to indicate any political, social, ethical, or moral indictment. The revelation is for the purpose of a gentle and slightly critical laugh at man's lapses into disorder. From the linguistic point of view, humor will be defined through the tones of words and phrases as that being devoid of sharp extremes in terms of striking power and duration.

Wit is seen as the use of language itself in carrying the critical picture or image. All that is

carried about wit must be reached through the words and tones of the words themselves. Irony, however, is a more complex matter, insofar as it is a method, and yet also a tool. As a tool, irony points out what is known by "A" and not by "B," or it is an obvious truth to one group of individuals, but an obvious opposite truth to another group. In language, irony is identifiable through the opposite tonal intensity distinction to the tones of the words themselves.

Irony does have some sincerity about it, even though grim. However, cynicism is that tool asserting that no man, or movement, operates on the level of his aspiration. Motives are suspect. Purposes are never understood. Man is never honorable when competent, but only when naive. The tones of language are invariably falling in the cynical mode.

Sardonicism is the tool by which the writer or speaker directs attention to himself as one so terribly evil and so unalterably lost that he is entirely beyond salvation. The sardonicist uses this tool for one or two purposes. He either wishes to lash himself savagely, as a masochist, or he wishes to excuse himself from being forced to mend his ways--since he is beyond mending. The

laughter is easily identifiable since the tool is always directed at the "I."

Invective is much like sardonicism in reference to tone. However, the attack or tool in invective is directed away from the speaker toward the external world of things, ideas, events, and persons. The attack is so broad and massive that it destroys not only the individual but the class. The tones of the tool are heavy, smashing, and sustained in striking power, duration, and intensity. Apart from the definitions stated thus far, it is important to remember that words do not mean, but carry meaning. A phoneme is not a unit of meaning, rather it is the smallest speech unit which signals a change in meaning. The phoneme is considered implicitly and explicitly in Robson's The Orchestra of the Language and in Williams' "Beauty of Style."

The nature of the works cited will be given operational definitions in Chapter Two. Remaining to be considered is the work which has been done in the area of language for Swift and for Gulliver's Travels.

PREVIOUS WORK IN THE FIELD

Much work has been done on Swift in both master's and doctoral theses. The apparent concern indicated by

the major part of research has centered on his philosophy, his ethics, his religion, or his social and political views of man and the state. However, there have been some comments on his use of language. In fact, a 1929 text, Kingsmill's An Anthology of Invective and Abuse,[5] has a section on Swift's use of abuse and invective. However, Kingsmill defines "invective" as, "...in this anthology to be any direct verbal attack."[6] His comments remain in this vein and with this broad and non-specific definition, for all words, in a way, are direct and verbal in a critical sense. He pays little attention to any look at the words themselves as language elements evoking the invective sense.

Milic in his A Quantitative Approach to the Style of Jonathan Swift[7] has a comprehensive view of the language employed by Swift. This book, which opposes or enters a point of view contrary to impressionistic criticism, is more concerned with total stylistic qualities than with

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[5]Hugh Kingsmill, An Anthology of Invective and Abuse (New York: Dial Press, 1929).

[6]Ibid., p. 1.

[7]Louis Milic, A Quantitative Approach to the Style of Jonathan Swift (The Hague: Mouton, 1967).

any specific tool of satire. Appendix A[8] contains the reproduction of the "Table of Contents." Appendix B[9] contains a reproduction of the "Lists of Tables." From these, the reader can get an insight into the scope of Milic's work. Reliance will be placed on Milic only where his parts of speech clustering, as indicated in Appendix A and Appendix B bears directly on invective and other tools of satire.

Johannes Soderlind, in his article, "Swift and Linguistics,"[10] indicates the significance of word tones and power in appreciating Swift's use of certain phonemic combinations to obtain certain powerful and critical effects. Another essayist in the field of language effects is David Boder.[11] Maurice Quinlan[12] has shown an interest in Swift's approach to language, through the method of

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[8]Ibid., pp. 9-10, see as Appendix A.

[9]Ibid., pp. 11-14, see as Appendix B.

[10]Johannes Soderlind, "Swift and Linguistics," Eng. Studies, LI, 2 (April, 1970), 137-143.

[11]David R. Boder, "The Adjective-Verb Quotient: A Contribution to the Psychology of Language," The Psy. Rec., III, 40 (March, 1940), 309-343.

[12]Maurice Quinlan, "Swift's Use of Literalization as a Rhetorical Device," PMLA, LXXII, 7 (December, 1967), p. 516 et sequentia.

considering Swift's employment of rhetoric in achieving a balance between metaphor and the literal statement.

These are the more contemporary items on Swift and his use of language. In addition to these are included in the bibliography those writers whose works have been read and whose thoughts have been considered to have some general weight. The direct reliance on the measurement of invective must come, then, from the work of Robson and Williams, already cited.

Chapter 2

EXPLANATION OF TECHNIQUES FOR MEASURING INVECTIVE

In this monograph, invective according to lexical items will be considered in terms of a complete verbal attack. This attack will be a complete and all-encompassing attack in so far as it strikes out at the entire individual, social group, and institution. The test for invective depends on the completeness or the massive width of the assault. A striking example is like the one found in the second voyage.

Swift's account of the second voyage--to the land of the giants--is sufficient to evoke an attack of nausea. The utter grotesqueness of their size warrants that effect. Swift makes an observation through the ruler to the effect that:

> I cannot but conclude the Bulk of your Natives, to be the most pernicious Race of little Odious Vermin that Nature ever suffered to crawl upon the surface of the earth.[13]

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[13]Swift, op. cit., p. 107.

Here one sees an example of a verbal attack so complete, and so devastating, to the race of man that there can be little room for his redeeming or ever improving himself. Vermin cannot be transformed into a human being, and the pernicious cannot be transformed into a moral state or condition. There will be two or three statements examined for the purposes of general invective. Although it would be possible to examine many of the works of Swift's contemporaries, it is perhaps more feasible to select two for comparison and contrast with Swift. In order to find whether or not their verse or prose contains invective, selections from Addison and Defoe were chosen.

Addison's interests were apparently as wide as Swift's; on the basis of this factor Milic observes their likeness:

> A glance at Swift's writing shows that, like Addison, there is a wide range of interests: politics, religion, economics, manners, language, and history.[14]

Resembling closely the style of Swift, Addison's lines reveal irony, parody, and persuasion. Differing in this respect, Addison's lines seldom engage in vilification or in heavy-handed indictments.

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[14]Milic, op. cit., p. 126.

Both Addison and Steele commented in The Spectator on the frailties of man and were interested in reforming and uplifting the morality of the day. Addison's art is singled out because it is more sententious, less kindly, but more polished that Steele's, whose light-hearted and outgoing qualities make it difficult to be unkind. The following comment in "The Aims of the Spectator," is quite typical of his tone, style, and views:

> There is another set of men that I likewise lay a claim to, whom I have lately called the blanks of society, as being altogether unfurnished with ideas, till the business and conversation of the day have supplied them. I have often considered these poor souls with an eye of great commiseration, when I have heard them asking the first man they have met with, whether there was any news stirring? and by that means gathering together materials for thinking. These needy persons do not know what to talk of till about twelve o'clock in the morning; for by that time they are pretty good judges of the weather, know which way the wind sits, and whether the Dutch mail be come in.[15]

These lines from Addison reveal a lexicon very far from complimentary. However, they fail to indict man in such a manner capable of removing him from the human race. Although the phrase "social blanks of society" does not

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[15]Joseph Addison, "The Periodical Essay: Ideas," in The Norton Anthology of English Literature, by M. H. Abrams, et al., Vol. 1, (New York: W. W. Norton, 1968), p. 1667.

carry a pleasant connotation, there is, however, room left for improvement.

The attack is limited insofar as it is directed toward a facet of society or a group of individuals different in certain aspects of culture. Addison allows man to remain man; thus, his attack is mild in comparison with Swift's, which in likening man to vermin, denies humanity existence.

Addison's didacticism in the following observation is not too far different from Swift's concern with man and his behavior. Differing from Swift, however, Addison does not destroy, in his lecturing, man--the subject--as well as the object of these lectures:

> A man's first care should be to avoid the reproaches of his own heart; his next, to escape the censures of the world. If the last interferes with the former, it ought to be entirely neglected; but otherwise there cannot be a greater satisfaction to an honest mind than to see those approbations which it gives itself seconded to the applauses of the public. A man is more sure of conduct when the verdict which he passes upon his own behavior is thus warranted and confirmed by the opinion of all that know him.[16]

What Addison is essentially saying is that man should be

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[16]Joseph Addison, "Sir Roger at the Assizes," in The Literature of England, by George Anderson, et al., (Illinois: Scott, Foresman and Co., 1953), p. 488.

primarily concerned with his self-concept. The self is mildly scolded into listening and into taking heed, but not denied existence. The reader observes himself and others as erring human beings, and there is always room for correction of these human fallacies.

Dryden, a forerunner of Swift and Addison, would be a good example for a master of invective. However, Dryden focuses on those attacks of an extremely personal nature, thus, falling into the realm of sarcasm rather than invective. Dryden would be an appropriate subject for comparison and contrast with Pope because each used, almost exclusively, the poetic form for criticism. Dryden's satires, "Absol*o*m and Achitophel" and "MacFlecknoe" reflect a more personal nature than do Swift's. Many uses of vilification can be found in Dryden's poetry. In this monograph, however, invective will carry a more general and complete attack than vilification. Swift's satiric art is more frightening and pessimistic because depersonal detached views of man and his institutions are evident. Daniel Defoe is chosen instead as a more likely figure for comparison with Swift.

Defoe's writing is chiefly in prose form, and like Swift's, his prose appears to be direct, powerful, and

somewhat moralistic. Defoe's essays found in his journal The Review (ca. 1706-1713) reflect a concern with morals, manners, and small views of his English society. However powerful his statements, lucid his style, and critical his essays appear, there is an absence of the booming, leveling attacks amassed by Swift.

Many of the viewpoints typical of Defoe are found in his "An Essay on Projects." The list of projects indicates and expresses their importance for the betterment of his eighteenth century England. The statements that refer to the education of women reveal his style and tone:

> On the other hand, suppose her to be the very same woman. If her temper be good, want of education makes her soft and easy. Her wit, for want of teaching, makes her impertinent and talkative. Her knowledge, for want of judgment and experience, makes her fanciful and whimsical. If her temper be bad want of breeding makes her worse, and she grows haughty, insolent, and loud. If she be passionate, want of manners makes her termagant and a scold, which is much at one with lunatic. If she be proud, want of discretion (which still is breeding) makes her conceited, fantastic, and ridiculous. And from these she degenerates to be turbulent, clangorous, noisy, nasty, and the devil.[17]

That there are phrases with a considerable power of attack, cannot be denied, but the attack is directed toward

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[17]The Literature of England, op. cit., p. 454.

amendment rather than disdainfulness. This amendment is to be accomplished through education appropriate to the various stations held by individuals in society. There is no gloomy assumption that there is an innate quality in woman that makes her ineducable. Although gifted with a sense of irony and verbal bent for the critical statement, neither Defoe nor Addison has the sustained gift for invective, one uniquely that of Swift. Then, from this general semantic position, the invective will be viewed from Robson's position.[18] This position is one taken for writers desiring to write effectively in the different modes, whether critical or creative.

The analogy of language to music is made because there are certain effects produced by vowels and consonants in the English phonemic alphabet which are measured through nearly a dozen sets of orchestral divisions in much the same way as music is handled through different sections of a real musical orchestra. The "Orchestra of the Language" as pictorially represented, is shown to include three units for the vowels, with the other movements or units reserved for the consonants

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[18]Robson, op. cit., pp. 31-38, see as Appendix C.

or diphthongs.[19]

After a more intense description of the "Orchestra of the Language" it will be observed that each vowel, diphthong, and consonant has a striking power relative to each, with "1" as the smallest unit. The figure of "30" is the top striking power, derived relative to all other phonemes. Moreover, certain sounds of the alphabet, in combination--/ng/, /sh/, /ch/--tend to evoke certain sensations or emotive responses.

There is a humming resonance in /n/ and a blurry denseness in /ng/. These qualities seem independent of the presence of neighboring vowels or consonants. The plasticity, softness, and liquidity of the tongue when /l/ is used to create, under one condition, a sense of falling off, a leveling, or a dulling. In others, there is a sense of uplift.[20] The section dealing with these matters in Robson is reproduced. The appeals to the emotive response of the reader or that emotive bent--most likely subconscious of the writer--along with the striking power already cited are used to improve composition and to

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[19]Robson, op. cit., p. 32, see as Appendix C.

[20]Ibid., pp. 34-38, see as Appendix C.

analyze compositions already created.

In addition to the striking power, there is also a concern with the matter of intensity. While the striking power is measured on a relative scale from one to thirty, the intensity of a sound, syllable, phrase, clause or entire passage is derived from dividing the striking power of a word by its "time duration."[21] The time duration is given in fractions of a second.

One may readily observe that when the striking power of a word is divided by its time duration, the intensity of a word, or other unit to be measured, should be derivable. For example, if the striking power of a word totals "50" and its duration in seconds is ".50," the intensity of 50/.50 is "100." If the same striking power, numerically, in another word is still "50" but its time duration is "75," then the intensity for this second word is "67."

Robson has taken the position that some writers characteristically use words of a striking power range in comparison and contrast to others whose range is not the same. Subject matter will determine striking power,

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[21]Robson, op. cit., pp. 146-149, see as Appendix D.

time duration, and intensity; however, even when individuals work on the subject or theme, the written expressions will show a variance in range among striking power, time duration, and intensity. Some of the phonemes in combination take longer phonologically to utter than others. In such instances the time duration in seconds is greater. The greater the denominator, numerically, the less the product is in intensity.

The greatest intensity is achieved when the striking power is great or approaching "30" and when the time duration is least or approaching ".01" in seconds. Therefore, it is impossible to get the heavy-handedness needed in invective and tragic irony with a numerically high time duration. The method of operation is indicated in a comparative statement.

The total striking power, time duration, and resulting intensity of the passage from Swift[22] already cited are derived to have a striking power of 1296 and a time duration of 12.60 seconds and a resulting intensity of 103. Addison's[23] and Defoe's[24] passages compare with

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[22]Swift, op. cit., p. 107.

[23]The Literature of England, op. cit., p. 488

[24]Ibid., p. 454.

Swift's in having intensities of 86.1 and 94.6, respectively.

Another quite specific reference to phonemic constitution is used in relating Williams' "Beauty of Style"[25] to the phonemic constitution of Swift's prose. The assumption is made that while certain lexical items in the time of Swift may differ today as to meaning, the tones of the English language in written form have not varied radically within the context of the material of this monograph.

Williams' arrangement of consonants includes a descending order ranging from "Beautiful" through "Negative" to "Ugly." He also indicates that certain combinations of the "Beautiful" combining with certain other consonants or vowels result in ugly lines, as in, "fat black bucks in a barrel-room house."[26] He then goes on to relate that certain consonants have or carry emotive connotations, and he uses "The Lotus Eaters"[27] and "The Lady of Shalott" for the purpose. Williams' work proceeds through exemplifing certain consonant and vowel combinations. He then moves to "consonant patterns" through the rhythmic rise and fall of poetic lines or prose lines. Elements of Williams'

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[25]Williams, op. cit., p. 110, see as Appendix E.

[26]Ibid., p. 110, see as Appendix E.

[27]Ibid., p. 111, see as Appendix E.

viewpoints will be applied to passages selected from Swift. The same tests will be applied to each passage.

In review, there are a certain number of passages chosen from each of Swift's voyages. Chosen, initially, for their semantic overtones of general attacks on individuals or institutional groups, they then become subject to the test of Robson to determine striking power, time duration, and intensity. For a third test using the same passage, the work of Williams' is used in testing for that which is "Negative" or "Ugly" because of consonant and vowel tones and patterning. Accepting Williams' categorizing of pure sounds and feeling and letter sounds, one should make a careful study concerning the presence of what Williams calls "Pure Sounds" as they relate to two of his three categories, those of the "Negative" and the "Ugly."[28] The "Beautiful" will not be measured.

There are a total number of phonemes present in the passages selected for each voyage. These phonemes contain consonants comprising the number of "Negative" and "Ugly" sounds. The question arises as to whether the language used in the quotations from Gulliver's Travels contains a

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[28]Williams, op. cit., p. 107.

greater number of the "Negative" and "Ugly" sounds than may be expected. If this is true, there must be a standard. The standard used is that provided by Dewey's Relative Frequency of English Speech Sounds.[29] In this substantial work, there is a frequency for the occurring speech sounds reduced or represented graphically, in terms of the writer and reader.

With the expected frequency at hand and with the observed frequency in the different quotations taken from the four voyages in Gulliver's Travels, a comparison and a contrast is made between the "Negative" expected in Dewey against the analysis of the categories of the "Ugly" and the "Negative" as cited in Williams.

A second test is applied in the Williams' "Beauty of Style" comparisons. That comparison refers to vowels. Williams takes the position that /ă/, /ĕ/, and /ŭ/ are "Dull" and "Heavy." The /aw/ was included along with the /ow/ and the relative frequencies of each were added together to comprise one unit for comparison. The occurrence of vowel sounds which are negative in Williams

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[29]Godfrey Dewey, Relative Frequency of English Speech Sounds (Cambridge: Harvard University Press, 1923), p. 125, see as Appendix G.

work will be noticed in each quotation and compared with expected occurrences found in Dewey. If the consonant and vowel comparisons have greater observed frequencies than expected frequencies, a useful correlation between Robson's The Orchestra of the Language and Williams' "Beauty of Style" may result.

Chapter Three will begin an analysis of Voyage One in Gulliver's Travels concerned with invective. An application of The Orchestra of the Language and "Beauty of Style" is made using Dewey's Relative Frequency of English Speech Sounds as a standard. These tests will continue to be used in the remaining chapters of this monograph.

Chapter 3

ANALYSIS OF THE INVECTIVE IN GULLIVER'S TRAVELS: "A VOYAGE TO LILLIPUT"

BRIEF STATEMENT AS TO THE NATURE OF THIS BOOK

In the first voyage Gulliver is not English. He is an outsider and does not comment on his own countrymen, because their faults are obviously those of the Lilliputians. Lilliputian characters may be identified with personages of contemporary English politics.

The issue of "morals versus manners" is brought to light to the effect that the Lilliputian's morals are shocking to Gulliver, and his manners are shocking to them.[30] His superiority is expressed in a physical sense because he was unable to shock them in a moral sense. Whether the use of the physical is a way of revealing intellectual and physical inferiority or superiority, or whether it is a contrast of the offensive character both of physical grotesqueness in

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[30]Allan Bloom, "An Outline of Gulliver's Travels," in A Norton Critical Edition of Gulliver's Travels, ed. Robert A. Greenberg, (New York: W. W. Norton, 1970), pp. 297 et sequentia, passim.

one respect and of the minuteness of moral and spiritual qualities in opposition will not be resolved here.

Lemuel, as an observer, notices not only the limited physical size of the Lilliputians, but also their limitations in respect to moral, ethical, political, or social problems. Two approaches may be considered with regard to Gulliver's behavior in relation to the language of the book. One may be that he evokes nausea in the natives because their actions inspire him to behave as such. A second possible approach is that whatever is fed into the total satire comes out in physical terms. Thus, if the physical terms appear nauseous, they are so because the total behavior of the Lilliputians is nauseous as well.

The approach taken in this monograph is that the grossness of Lemuel's acts and the grossness of the language referring to Lemuel and his impact on the Lilliputians are literary devices. The smallness of man's nature is reflected in the size of the natives. Lemuel's physical expressions are at least natural if not noble or restrained. The rough odor or even the stench of physical reality is preferable to the hypocrisy and shame of man's operations of his institutions, as seen in the land of the Lilliputians.

THE ROBSON APPLICATION

Ten quotations were selected from this voyage, and five were chosen for what is considered invective, a general sweeping comment on the individual, individuals, institution, or set of institutions. Because the limited scope of this monograph did not permit exhaustive interpretation of that number, five were chosen by random sample. Those not selected for analysis are found in Appendix G. The actual selection of the passages is in terms of their semantic harshness of content. The term "harshness" is not meant to be a negative or positive point of criticism. By harshness is meant the total jarring impact of the language on the part of Lemuel. Each quotation is given, and the results of the application of Robson's[31] theory is given for each.

The first quotation selected comes from the incident where carelessness or viciousness in high places result in the burning of the imperial apartment. This burning, both real and symbolic, evokes sentiments expressed in nauseous tones:

The heat I had contracted by coming very

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[31]Robson, op. cit., pp. 146-149.

> near the flames and by labouring to quench them, made the wine begin to operate by urine; which I voided in such a quantity, and applied so well to the proper places, that in three minutes the fire was wholly extinguished, and the rest of that noble pile, which had cost many ages in erecting, preserved from destruction.[32]

The principles of Robson's theory on The Orchestra of the Language as explained in Chapter Two of this monograph have been applied to obtain intensity and striking power.

The total striking power for the entire passage is kept at a reasonably high figure for each phrase, with the total being 1592. The total time duration is 14.59 seconds. The mean intensity for the passage is 109.

The second quotation comes where the colonel picks up the scapegoats and hands them over to Lemuel for punishment. They had shot at the prisoner (Lemuel), hoping to hurt him. The arrows can be treated as real, or as symbolic. Again, the event can be considered as real, or as symbolic, whereby a few obvious individuals are saved for institutional sacrifice. Whether considered real or symbolic, the ironic tones, reduced to physical terms, come in the quotation:

> But the colonel ordered six of the ringleaders to be seized, and thought no punishment so proper

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[32]Swift, op. cit., p. 45.

> as to deliver them bound into my hands, which some of his soldiers accordingly did, pushing them forwards with the butt-ends of their pikes into my reach, I took them all in my right hand, put five of them into my coat-pocket, and as to the sixth, I made a countenance as if I would eat him alive.[33]

The grimness of the meaning, through the ordinary meanings carried by the words, is evidenced by a sustained heavy tone. It is apparent that the intensity of this passage, while strong, is not as heavy as the invective of the first passage. The total striking power is 1590 with the time duration of 16.3 seconds. This results in an intensity of 96.3, one quite consistent with the sustained tones that are close to tragedy, those that are appropriate to a heavy-handed irony or invective.

The third quotation, selected for its heavy-handed tones and for the critical note of ministers represented in the sounding names with the /g/ and /d/, and low-toned vowel clustering, relates to the array of imperialism presented to the alien Lemuel:

> Golbasto Momaren Eveane Gerdilo Shefin Mully Ully Goe, most mighty Emperor of Lilliput, delight and terror of the universe, whose dominions extend five thousand blustrugs (about twelve miles in circumference), to the extremities of the globe;

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[33]Swift, op. cit., p. 25.

> monarch of all monarchs, taller than the sons of men; whose feet press down to the center, and whose head strikes against the sun: at whose nod the princes of the earth shake their knees; pleasant at the spring, comfortable as the summer, fruitful as autumn, dreadful as winter.[34]

The evaluation by Robson's method indicates what could be expected: sustained striking power, sustained time duration, and sustained intensity. The striking power is 2454; the time duration is 22.6; and the derived intensity is 109.3.

The fourth quotation is obviously supported by its physical appeal to the sense of taste, pressure, and odor. A sense of annihilation is pervasive through the entire passage, as in "starve," "poison," "carcase," and "plague," for example:

> Sometimes they determined to starve me, or at least shoot me in the face and hands with poisoned arrows, which would soon dispatch me: but again they considered the stench of so large a carcase might produce a plague in the metropolis, and probably spread through the whole kingdom.[35]

The data for this quotation seem to vary only slightly with the other examples: the striking power is 1096; the duration in seconds is 10.3; and, the resulting

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[34]Swift, op. cit., p. 35.

[35]Ibid., p. 26.

intensity is 105. The sustained semantic tone of annihilation, through the passage, would warrant such an intensity.

The fifth quotation is concerned with Gulliver's being charged with treason. With a heavy note of accusation, emphasis is directed toward his actions. He is charged because his actions are traitorous, malicious, and devilish, causing him to be liable for the pains and penalties which the Grand Judiciary will place upon him:

> Whereas, by a statute made in the reign of his Imperial Majesty Calin Deffar Plune, it is enacted, that whoever shall make water within the precincts of the royal palace shall be liable to the pains and penalties of high treason: notwithstanding, the said Quinbus Flestrin, in open breach of the said law, under colour of extinguishing the fire kindled in the apartment of his Majesty's most dear imperial consort, did maliciously, traitorously, and devilishly, by discharge of his urine, put out the said fire kindled in the said apartment, lying and being within the statute in that case provided, etc., against the duty, etc.[36]

The data for this quotation include a striking power of 3526, and a duration in seconds of 32.54. The resulting intensity is 109.

From this opening voyage one observes a substantial invective tone, with an average intensity for the five

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[36]Swift, op. cit., p. 107.

passages equalling 105.7. The next step is that of investigating Williams' "Beauty of Style" thesis and of seeing how the two equate.

CORRELATIONS WITH "BEAUTY OF STYLE"

Beauty is pleasing to the eye and to the ear, and is so independently of other senses. However, with few exceptions, it cannot be urged that writing, itself, is pleasing or displeasing to the eye insofar as its proportions are within the Euclidean linear formula of 100:62:5. If horizontal, vertical, and oblique lines are not out of this proportion as indicated, the printing can contain little to please or to displease the eye.

Although some poets have written their poems with a visual design that seems to bear some indication of reflecting a visual image whose nature is indicated in the poem, it seems unlikely that the print as such can be aesthetic. Williams' own statements reflect this sentiment:

> But since writing (exclusive of good penmanship or good printing) consists of ugly black wriggly figures spread across white pages, it cannot gratify the eye as a beautiful figure.[37]

The aesthetic appeal, large or small, must come from

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[37]Williams, op. cit., p. 107.

sounds and sound combinations beautiful to the ear. For the purpose of this monograph, the items in "Beauty of Style" are used for checking against invective. It is not considered that the tones characteristic of invective are those which correspond to "Beauty of Style" where the aesthetic beauty is with certain sounds rather than other Considering the "Pure Sounds," with the "Beautiful" including /l/, /m/, /n/, /r/, /v/, /s/, and /d/ in descending order, with "Negative" arranged as /t/, /f/, /w/, /y/ in descending order, the ugly as /k/, /b/, /p/, /h/, /g/, /j/, /z/, and considering the phonemic range in the quotations chosen in the first voyage, it appears that there are an unusual number of combinations in the "Negative" and "Ugly" range.

How can a range be established for considering whether the ratios of "Pure Sounds," "Ugly Sounds," "Negative Sounds," or "Beautiful Sounds" in these passages selected somewhat randomly are out of keeping with any kind of a universal range in English? Dewey, in a work revised three times since 1923,[38] has established a Relative Frequency for English Speech Sounds as represented

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[38]Dewey, op. cit., p. 125, see as Appendix F.

through samples of writing taken from twenty different sources. A comparison is made between the expected frequencies of these sounds and the observed frequencies of the "Ugly," "Negative," and "Beautiful" sounds as found in each of the four voyages.

In proportion to the expected occurrence in Dewey, the actual occurrence in the first voyage is represented in the following tabular statement:

"NEGATIVE AND UGLY" CONSONANTS

SOUND	EXPECTED PER CENT	OBSERVED PER CENT	PER CENT DECREASE/ INCREASE
/k/	2.70	3.30	+22.2
/b/	1.80	2.30	+22.7
/p/	2.00	2.60	+29.8
/h/	1.81	2.10	+16.7
/g/	.75	1.20	+ .6
/j/	.44	.60	+ .2
/z/	3.00	.09	-97.0
/t/	7.10	9.40	+32.3
/f/	1.85	2.40	+28.7
/w/	2.08	3.10	+49.0
/y/	.60	.90	+50.0

It is assumed for sake of comparison, that out of every hundred words in Dewey, the proportion and per cent occurrence would be 2.7 words out of 100 for /k/, and 1.8 for /b/.

There were 463 phonemic items in the five quotations as detailed above. From Dewey, one would expect an occurrence of 24.29 per cent of "Ugly" or "Negative" consonantal sounds out of the 463 items, or 115. The observed occurrence in the quotations was 129, or 14 above the expected. Calculations indicate at 18 per cent greater frequency for the invective than would be true for normally expected occurrence of sounds, graphically represented, as indicated by Dewey.

The expected frequencies for the vowels /æ/, /ɛ/, and /ʌ/ and /ɔ/ are .5, 3.4, and 5.3 per cent, respectively. Of the total 463 sounds, there would be expected for /æ/ 9, for /ɛ/ 22, and for /ʌ/ and /ɔ/ 25, or a total of 56. The results do reveal a greater incidence than would be expected in all three categories. There is a total of 59 of these sounds as compared with and contrasted to 43 as expected, or a total increase of 37.9 per cent. This increase is greater than the per cent increase in the area of the expected number for the "Ugly" and "Negative"

consonantal sounds. The data is presented in the following tabular statement:

"DULL AND HEAVY" VOWELS

SOUND	EXPECTED PER CENT	OBSERVED PER CENT	PER CENT INCREASE/ DECREASE
/ŏ/	.5	.60	+20.0
/ĕ/	3.4	4.30	+26.5
/ŭ/ and /ə/	5.3	7.82	+48.5

Following this voyage to Lilliput, Lemuel's second voyage takes him to Brobdingnag, or to the "land of the giants." Lemuel, an Englishman in this country, sees very clearly his countrymen's weaknesses in a land of people who are superior in physical, moral, and intellectual aspects.

Chapter 4

ANALYSIS OF THE INVECTIVE IN GULLIVER'S TRAVELS: "A VOYAGE TO BROBDINGNAG"

BRIEF STATEMENT AS TO THE NATURE OF THIS BOOK

In this second voyage, Gulliver is English and behaves like an Englishman. He finds himself in a position where he must defend England's institutions. In contrast to the first voyage, his inferiority is expressed when he meets a superior people. This inferiority makes him appear as the Lilliputians had appeared to him in the previous voyage. Sophisticated political systems are of no concern to the people of Brobdingnag.

Their concentration is on obedience to law, not interpretation of it. Therefore, the study of political science is nonexistent because there is no need for an interpretation of law.[39] The Brobdingnagians are a virtuous people, and this virtue may be justly called their "Weltanschauung" because all learning and

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[39]Bloom, op. cit., p. 303.

institutions are geared to produce this quality in their citizens. Brobdingnagian learning consists of four disciplines: morality, history, poetry, and mathematics.

In Voyage One, Lemuel's manners are shocking to the Lilliputians and their morals are shocking to him. A reversal in physical size is accompanied by a reversal in the "manners versus morals aspect," as well. The Brobdingnagian's manners are shocking to him, and his morals are shocking to them. The defects so grotesquely amplified for the Lilliputians are observed by him in the Brobdingnagians. He finds their physical size repulsive and the stench of their bodies nauseating. They find and convey to him their comments which are representative of their feelings about his littleness of stature and of his country's smallness in virtue. The perspective changes from the first to the second voyage:

> ...with the Brobdingnagians and the Houyhnhnms, he is all English, and they are usually foils used to bring out the weakness in his nature.[40]

In addition to the complete reversal in point of view from the first voyage to the second, an examination of the language will be observed in order to determine whether

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[40]Bloom, op. cit., p. 298.

there are some distinct differences as to the intensity and tone of the author's language when he is in an offensive position and then in a defensive position on a different occasion.

THE ROBSON APPLICATION

An application of Robson's The Orchestra of the Language is applied to the same procedure found in Chapter Two of this monograph. Ten quotations were chosen by random sample, and five out of this ten selected for analysis.

The first quotation from Voyage Two comes from a conversation at the royal palace. Lemuel has become a favorite guest at the King's apartment where he is looked upon as a novelty, or a showpiece, to the kingdom. On this particular evening, the dinner conversation is climaxed by Lemuel's presenting an account of English manners, religion, laws, government, and learning. The King responds after looking down at mere Lemuel:

> Then turning to his first minister, who waited behind him with a white staff, near as tall as the main-mast of the Royal Sovereign, he observed how contemptible a thing was human grandeur, which could be mimicked by such diminutive insects as I: And yet said he, I dare engage, those creatures have their titles and distinctions of honor, they contrive little nests and burrows that they call

> houses and cities; they make a figure in dress and equipage; they love, they fight, they dispute, they cheat, they betray.[41]

This passage, an indictment against Lemuel's customs and institutions, is accomplished by the King's reduction of a man to an insect. At the same time, the King denies Lemuel's country's ability in carrying out cultural activities. The tone of this passage is one of heavy-handed irony or invective. The data support this assumption with a striking power of 2637, a time duration of 24.6 seconds, and a resultant intensity of 107.

The context for the second quotation comes from one of the trips taken by Glumdalclitch and Lemuel through the kingdom. One of the most striking images is that of viewing a normally repulsive sight which becomes unbearable if magnified. The complete passage is filled with nauseous visual stimuli such as "vermin," "louse," "snouts," and "swine." Corresponding with these unpleasant semantic tones which are evoked is an intensity of 99 derived from a striking power of 827 and a time duration of 834.

The third quotation is of a similar nature to the second one. Again, the idea is that objects increased in

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[41]Swift, op. cit., p. 86.

physical size or blown out of proportion also have their flaws increased to the point of nausea:

> When the frog was got in, it hopped at once half the length of the boat, and then over my head, backwards and forwards, daubing my face and clothes with its odious slime. The largest of its features made it appear the most deformed animal that can be conceived.[42]

In addition to the unpleasant visual images, "daubing," and "odious slime," Lemuel's smallness, physically, is emphasized inasmuch as a frog is capable of attacking him and actually endangering his safety. The data for this quotation include a striking power of 1159 and a time duration of 11.45 seconds. The intensity is 112 which seems commensurate with the semantic tone of the passage.

Quotation Four is mentioned, previously, in Chapter Two. It appears as the aftermath of Lemuel's briefing the King on the state of European affairs:

> But, by what I have gathered from your own relation, and the answers I have with much pains wringed and extorted from you, I cannot but conclude the bulk of your natives to be the most pernicious race of little odious vermin that nature ever suffered to crawl upon the surface of the earth.[43]

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[42]Swift, op. cit., p. 92.

[43]Ibid., p. 107.

The computed intensity of the passage supports the semantic aspect in that such words as "wringed," "extorted," and "suffered" connote an emotional intensity. The data for this passage consist of a striking power of 1296, a time duration of 1260, and a resulting intensity of 103.

Quotation Five, the last one selected from this voyage, indicates the stimulus for prompting the queen to comment on cowardliness. She asked Lemuel whether all of the people of his country were cowards like himself:

> The Kingdom is much pestered with flies in summer, and these odious insects, each of them as big as a Dunstable lark, hardly gave me any rest while I sat at dinner, with their continual humming and buzzing about my ears.[44]

Lemuel's fears of insects as large as larks are supported by the auditory stimuli of the words "pestered," "flies," "humming," and "buzzing." Data for this quotation include a striking power of 1050, a time duration of 1081, and a derived intensity of 97.

Intensities ranged from 97 to 112 for the five quotations chosen from Voyage Two. The average intensity for these quotations is 103.8. When compared with the

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[44]Swift, op. cit., p. 88.

average intensity from Voyage One, a decrease of 1.9 was observed.

CORRELATIONS WITH "BEAUTY OF STYLE"

In order to correlate the results found on applying Robson's The Orchestra of the Language, Williams' "Beauty of Style" thesis is employed. Considering the "Pure Sounds," with the "Beautiful" including /l/, /m/, /n/, /r/, /v/, /s/, and /d/ in descending order, with "Negative" arranged as /t/, /f/, /w/, /y/ in descending order, and the "Ugly" as /k/. /b/, /p/, /h/, /g/, /j/, /z/ it appears that Voyage Two contains an unusual number of combinations in the "Negative" and "Ugly" range. A comparison between the expected number of these sounds and the observed number is made, using Dewey's[45] Relative Frequency for English Speech Sounds as a standard. Following the same procedure used in Chapter Three, only the "Negative" and "Ugly" sounds were measured.

A tabular statement for Voyage Two is entered on the next page. The first one concerns the expected and observed percentages of consonants, with an overall total

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[45]Dewey, op. cit., p. 125.

"UGLY AND NEGATIVE" CONSONANTS

SOUND	EXPECTED PER CENT	OBSERVED PER CENT	PER CENT DECREASE/ INCREASE
/k/	2.70	3.80	+24.6
/b/	1.80	2.30	+28.0
/p/	2.00	1.90	- 5.0
/h/	1.81	2.50	+38.0
/g/	.75	2.40	+230.0
/j/	.44	0	0
/z/	3.00	2.63	-11.0
/t/	7.10	8.90	+26.0
/f/	1.85	2.30	+21.0
/w/	2.08	1.90	- 5.0
/y/	.60	1.30	+116.0

increase for the voyage. A similar statement contains the same information for the vowel sounds considered unpleasant.

"DULL AND HEAVY" VOWELS

SOUND	EXPECTED PER CENT	OBSERVED PER CENT	PER CENT DECREASE/ INCREASE
/ɑ̆/	.5	2.5	+80.0
/ĕ/	3.4	2.5	-26.0
/ɜ̆/, /ə/	5.3	3.7	-30.2

The voyage to Brobdingnag contains 533 phonemic items. According to the expected percentage of consonants there should be 130. The observed percentage of consonants is 30 or 159, an increase of 29 over the expected; this produces a total increase of 23.2 per cent. In reference to the "Dull" or "Heavy" vowels, an increase was computed also. The expected per cent is 8.2 or 43, and the observed 8.7 or 46. Therefore, the total percentage increase for the vowels equal equals 6.1 per cent.

Following the voyage, Lemuel makes a third voyage

to Laputa, Balnibarbi, Glubbdubdrib, Luggnagg, and Japan. In this voyage Lemuel is not English, but is an external observer. His invective is spread over a variety of his concerns, but the one target is on science.

Chapter 5

ANALYSIS OF THE INVECTIVE IN GULLIVER'S TRAVELS: "A VOYAGE TO LAPUTA, BALNIBARBI, GLUBBDUBDRIB, LUGGNAG, AND JAPAN."

BRIEF STATEMENT AS TO THE NATURE OF THIS BOOK

A journey to Laputa exposes Lemuel Gulliver, a non-Englishman, to a society in which technology has gone beyond all reasonable limits. Gulliver finds himself an outcast insofar as he is practical, and Laputian society has no respect for this trait. Such matters as human communication and practical mathematics are lacking. Things exist theoretically, but applications of the theories are held in contempt. Verbalization consists of musical and scientific phraseology. Food is cut into geometrical shapes. Even the beauty of women is described in terms of circles, parallelograms, ellipses, or other geometrical terms. The Laputian mores and morals are little better.

Laputian morality, like Lilliputian morality, is shocking to Lemuel. He discovers that adultery is

commonplace because the husbands are always deep in thought on their scientific papers. They neglect their wives completely when they are without flappers to command attention. Flappers are the implements used for purposes of striking another person with whom one wishes to converse. The island of Laputa is controlled by a group of astronomers, who, at the direction of the monarch, can position the flying island wherever he wishes. Culture, then, is primarily science.

Human learning consists of science and mathematics. Good poetry is nonexistent as it is also lacking in Lilliput. The center of learning is at the Grand Academy of Lagado. A great number of projects are being conducted, some of which have been in progress for many years. Lemuel finds the scientific endeavors absurd. Projects range from condensing air, producing cephalic tinctures--which if swallowed produce instantaneous knowledge--and making a frame consisting of strings of words connected to an engine. This engine, if operated, can produce volumes of poetry, theology, philosophy, and other works in the arts and sciences, all without the work of genius.

From Lemuel's description of this voyage, one senses that this is not the ideal society. In all aspects

of culture, there seems to be a deviation toward the extremes. The Luggnaggians are people different from those on other islands on this voyage. Some of them are immortal citizens. These citizens, although a minority group, are not happy with their immortality, because it places them in a miserable plight. Here, Swift anticipates problems in Geriatrics.

English society, identifiable in Laputa, is typically characterized by Swift. He believes that society is overburdened with the "Eighteenth Century Enlightenment." The dangers to which a society may be subject when technology goes far beyond the bounds and limits of human concern are clearly exposed through Swiftian invective. Tyranny becomes devastating when a ruler has technology as an assistant. Moral decadence is the product where manners overpower morals in value. Laputa perhaps identifies more effectively than Lilliput the "manners and morals issue." One sees the eighteenth century concern with manners in the Laputians who were taxed on the basis of a self-report method. Such things as politeness, wit, and skill in dressing, were good taxable items in that each man and woman wished to exceed his neighbor in these qualities. Swift's attacks, then, focus on the deductible scientific

approach, on longevity without humanity, and on style without moral security.

THE ROBSON APPLICATION

Quotation One comes from a report on the visit to the Academy at Lagado. Lemuel expresses the danger of faulty analogy. Here at the academy a doctor supposedly well-versed in government as well as medicine attempts to make useful analogies of diseases of the government to diseases of the body:

> It is allowed that senates and great councils are often troubled with redundant, ebullient, and other peccant humours, with many diseases of the head, and more of the heart; with strong convulsions, with grievous contractions of the nerves and sinews in both hands, but especially the right; with spleen, flatus, vertigos and deliriums; with scrofulous tumours full of foetid purulent matter; with our frothy ructations, with canine appetites and crudeness of digestion, besides many other needless to mention.[46]

The language of this passage is unpleasant both to the visual and auditory senses. It has a heavy and sustained phonological weight. The data for this passage include a striking power of 2492, with a time duration of 23.15 in seconds. The resultant intensity is 107 which would

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[46]Swift, op. cit., p. 152.

correspond to the predictable ugly and crude semantic overtones.

The second quotation is of a similar nature. Evidently, the government officials are not the intellectually elite of the country. The following treatment is proposed by a doctor to alleviate their habitual symptoms of forgetfulness:

> Again, because it is a general complaint that the favorites of the princes are troubled with short and weak memories, the same doctor proposed, that whoever attended a first minister, after having told his business with the utmost brevity, and in the plainest words, should at his departure give the said minister a tweak by the nose, or a kick in the belly, or tread on his corns, or lug him thrice by both ears, or run a pin into his breach, or pinch his arm black and blue, to prevent forgetfulness: and at every levee day repeat the same operation till the business were done or absolutely refused.[47]

The quotation evokes an unpleasant emotion through an appeals to the sense of touch. An appeal to the sense of pressure through an infliction of physical pain to cure an intellectual impairment should produce a duration nearly equal to that of the previous passage. The data for the striking power which is 2719 reveal an increase. The duration in seconds, 26.64, is slightly greater than that

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[47]Swift, op. cit., p. 153.

of the previous quotation. Therefore, the intensity of 102 is not as great as the first quotation selected from the voyage. When the duration is larger the intensity decreases. The next quotation is discursive as well.

The third quotation comes from a discussion between Lemuel and a professor at the academy. Lemuel reports on the conduct of the people at one of the former countries he has visited because he thinks it will aid the professor in the writing of a discourse:

> I told him, that in the kingdom of Tribnia, by the natives called Langden, where I had long sojourned, the bulk of the people consisted wholly of discoverers, witnesses, informers, accusers, prosecutors, evidences, swearers, together with their several subservient and subaltern instruments, all under the colours, the conduct, and pay of ministers and their deputies.[48]

From a brief look at the passage, one would assume that the strong declarative statement would have a sustained duration. The data support this assumption with a striking power of 1952, and a time duration in seconds of 1812. A derived intensity of 108 is the result.

Quotation Four is concerned with Lemuel's explanation of the kingdom of Tribnia's system of justice. The system of extracting information from suspected

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[48]Swift, op. cit., p. 155.

conspirators is done in the following method:

> For instance, they can decipher a close-stool to signify a privy-council, a flock of geese a senate, a lame dog an invader, a codshed a _____, the plague a standing army, a buzzard a prime minister, the gout a high priest, a gibbet a secretary of state, a chamber pot a committee of gradees, a sieve a court lady, a broom a revolution, a mousetrap an employment, a bottomless pit the treasury, a sink a court, a cap and bells a favority, a broken reed a court of justice, an empty tun a general, a running sore the administration.[49]

This indictment against man and his institutions which reduces him almost to absurdity produces an intensity which corresponds with the semantic tone of the passage. The striking power is 3191, the time duration is 3002, and the derived intensity 107.

The fifth, and final, quotation selected from the third voyage is concerned with Lemuel's experiences at the island of Glubbdubdrib, or the island of the sorcerers or magicians. Lemuel asks for the ancients who were most renowned for wit and learning. After comparing the ancients and moderns, he finds himself thoroughly disgusted:

> I found how the world had been misled by prostitute writers, to ascribe the greatest exploits in war to cowards, the wisest counsel to fools, sincerity to flatterers, Roman virtue to betrayers of their country, piety to atheists,

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[49]Swift, op. cit., p. 155.

> chastity to sodomites, truth to informers. How many innocent and excellent persons had been condemned to death or banishment, by the practising of great ministers upon the corruption of judges, and the malice of factions. How many villains had been exalted to the highest places of trust, power, dignity, and profit: how great a share in the motion of events of courts, councils, and senates might be challenged by bawds, whores, pimps, parasites, and buffoons: how low an opinion I had of human wisdom and integrity, when I was truly informed of the springs and motives of great enterprises and revolutions in the world, and of the contemptible accidents to which they owed their success.[50]

This passage contains the highest intensity observed from the passages in this voyage. This intensity does not seem to be unappropriate to the subject matter of the quotation. An indictment of such a wide scope as this necessitates a high intensity. The world with all of its false pretences is exposed. The computed striking power for this passage is 4772, and the decreased time duration in seconds is 42.09. Intensity is equal to 109.2.

The average intensity for the passages in this chapter is 106.7. The intensities for passages from Voyage Three are now compared with "Beauty of Style."

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[50]Swift, op. cit., p. 161.

CORRELATIONS WITH "BEAUTY OF STYLE"

In a review of those sounds which are "Negative" or "Positive" and pleasing or displeasing, one again considers the vowels and consonants evoking these effects. The "Negative" consonants are arranged in descending order: /t/, /f/, /w/, and /y/. The "Ugly" consonants are arranged in the following descending order: /k/, /b/, /p/, /h/, /g/, /z/, and /j/. Again it will be interesting to observe any significance in the expected and observed increases for these sounds. The vowels which tend to evoke unpleasant or negative effects are /ă/, /ĕ/, and /ŭ/ or /ə/. A tabular statement included on the following pages accounts for expected and observed percentages of these consonants and vowels as they are found to exist in the Voyage to Laputa. There is revealed an increase in both categories which is closer to the computed increases found in Voyage One or the Voyage to Lilliput. In proportion to the expected occurrence in Dewey, the actual computed results in the third Voyage are represented in the following tabular statements:

"UGLY AND NEGATIVE" CONSONANTS

SOUND	EXPECTED PER CENT	OBSERVED PER CENT	PER CENT DECREASE/ INCREASE
/k/	2.70	3.5	+29.0
/b/	1.80	2.2	+19.2
/p/	2.00	3.5	+80.0
/h/	1.81	2.8	+55.0
/g/	.75	1.1	+34.0
/j/	.44	.2	-54.0
/z/	3.00	3.7	+22.0
/t/	7.10	9.3	+31.2
/f/	1.85	1.7	- 7.0
/w/	2.08	2.1	0
/y/	.60	.5	- .17

"DULL AND HEAVY" VOWELS

SOUND	EXPECTED PER CENT	OBSERVED PER CENT	PER CENT DECREASE/ INCREASE
/ɑ̆/	.5	2.2	+340.0
/ɛ̆/	3.4	2.8	- 17.6
/ɯ̆/ and /ə/	5.3	6.0	+ 13.0

There is an observed increase of 27 per cent for the consonants. Likewise, an increase of 20 per cent is found for the vowels. The computation is made on the basis of the expected and observed frequencies which are percentages of the total phonemic items--1461--all comprising Voyage Three. The phonemic items when applied to Williams' "Beauty of Style" do seem to correlate with the high intensities observed in application of Robson's The Orchestra of the Language.

The fourth and final voyage to the land of Houyhnhnmns is often considered Swift's most cruel indictment of mankind. It remains to consider whether

this opinion is reflected in the invective selected by random sampling.

Chapter 6

ANALYSIS OF THE INVECTIVE IN GULLIVER'S TRAVELS: "A VOYAGE TO THE COUNTRY OF THE HOUYHNHNMS"

BRIEF STATEMENT AS TO THE NATURE OF THIS BOOK

A fourth and final voyage takes Lemuel Gulliver to the land of the Houyhnhnms. The account of this voyage reveals a situation where the rational aspects of man's existence control, completely, the irrational elements. On a more specific basis, the Houyhnhnms control the human creatures, the irrational--Yahoos.

Several interpretations or points of view can be made and have been made. On one level, it can be assumed that man's rational forces, when allowed to prevail, have a marked superiority. On another level, it can be assumed that man's irrational nature must condemn him, since he must always be inferior to the rational forces--indicated by the horse.

On another level, a reader finds himself in difficulty in adopting these points of view often accepted. For the horse, in traditional symbolism, invariably stands

for intense desires, instincts, and the magic side of man, as referenced through Cirlot's A Dictionary of Symbols.[51] Thus, it is possible that the horses Swift indicates are more out-of-keeping and out-of-place in Gulliver's Travels than are the Yahoos. Either Swift uses the symbol of the horse in contradistinction to the traditional equine symbolism, or he indicates that rationalism by itself is a complete distortion of the complete human personality which consists of thinking, feeling, and sensing, or of elements of the head, the heart, and the senses. It can well be that Swift is symbolically divorcing himself from the real flesh and blood equation by isolating, unnaturally, the reason from the irrational parts of man.

It can be said, then, that when reason and technological developments overpower benevolence and human concern, human society cannot be in equilibrium. When man's emotional, perceptual, and intellectual balance is disturbed, chaos results. In this final voyage one sees, clearly, the dichotomy between unbalanced elements with the Houyhnhnms--ultimate in reason and intellect--on one side and the extreme in passions and emotions--the Yahoos--on the

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[51] J. E. Cirlot, A Dictionary of Symbols, (Philosophical Library: New York, 1962) p. 145.

opposite side.

There are no needs or wants which are not provided by the Houyhnhnms. Their society is functionally simple because there are no sophisticated economic, political, or social systems. Simplicity is of utmost importance in meeting the need of the Houyhnhnm citizen. However, the Houyhnhnm State, with all of its idealism or apparent utopian nature, does not give the impression that it would be the type of society to which one would wish to belong. Without the emotional and the perceptual elements of personality, life becomes shallow and, for Lemuel, the plight of identifying with the Houyhnhnm is as frustrating as that of being a Yahoo.

THE ROBSON APPLICATION

The intensities found for the passages in this chapter are of particular importance for the analysis of invective. It will be especially interesting to see whether this final voyage is as verbally intense as the previous voyages.

In this voyage, where Lemuel is an Englishman, the master wishes to know about the crew or types of people Lemuel had on board his ship. This incident provides an

opportunity for the master to learn about some of the vices and corruption present in European society:

> Some were undone by lawsuits; others spent all they had in drinking, whoring, and gaming; others fled for treason; many for murder, theft, poisoning, robbery, perjury, forgery, coining false money, for committing rapes or sodomy, for flying from their colours, or deserting to the enemy, and most of them had broken prison; none of these durst return to their native countries for fear of being hanged, or of starving in a jail; and therefore were under a necessity of seeking a livelihood in other places.[52]

The intensity for the passage is 95, and the striking power is computed at 2488, with a time duration of 26.3 seconds.

Quotation Two comes from a lengthy discussion between the master and Lemuel revealing this Houyhnhnm's ignorance of warfare:

> I could not forbear shaking my head and smiling a little at his ignorance. And being no stranger to the art of war, I gave him a description of cannons, culverins, muskets, carabines, pistols, bullets, powder, swords, bayonets, battles, sieges, retreats, attacks, undermines, countermines, bombardments, sea-fights; ships sunk with a thousand men, twenty thousand killed on each side; dying groans, limbs flying in the air, smoke, noise, confusion, trampling to death under horses feet; flight, pursuit, victory, fields strewed with carcases left for food to dogs, and wolves, and birds of prey; plundering, stripping, ravishing,

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[52]Swift, op. cit., p. 203.

burning, and destroying.[53]

The semantic tones of the passage evoke several painful and fearful sensations. Visual, auditory, and olfactory stimuli are used effectively to produce these sensations. The striking power is 3797, the time duration 38.8, and the resultant intensity 98.

A continuing discussion of the state of England under the reign of Queen Anne is the motive for Quotation Three. Lemuel explains the affluent state of England and the polarity which exists because of luxury, intemperance, and vanity of the minority. He explains the types of occupations many Englishmen must follow:

> Hence, it follows of necessity that vast numbers of our people are compelled to seek their livelihood by begging, robbing, stealing, cheating, pimping, forswearing, flattering, subborning, forging, gaming, lying, fawning, hectoring, voting, scribbling, star-gazing, poisoning, whoring, canting, libelling, free-thinking, and the like occupations: every one of which terms, I was at much pains to make him understand.[54]

Swift places emphasis on the actions on ongoing processes themselves by using many gerunds. The intensity for the passage is 104, the derived striking power 2657, and the

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[53]Swift, op. cit., p. 218.

[54]Ibid., p. 203.

time duration 25.6 seconds.

A few months before Lemuel departs from Houyhnhnm land he has the opportunity to listen to an account of the first debate the Houyhnhnm's had experienced. The future of the Yahoos was the subject of the debate in Quotation Four:

> The question to be debated was, whether the yahoos should be exterminated from the face of the earth. One of the members for the affirmative offered several arguments of great strength and weight, alleging, that as the yahoos were the most filthy, noisome, and deformed animal which nature ever produced, so they were the most restive and indocible, mischievous and malicious.[55]

The intensity for this passage is 102, the derived striking power 1689, and the time duration 16.6 seconds.

The final quotation from this Voyage comes from Lemuel's expressed attempt to reconcile himself with the Yahoo-kind. He can tolerate all of the vices which nature permits, but finds pride an intolerable vice:

> I am not in the least provoked at the sight of a lawyer, a pickpocket, a colonel, a fool, a lord, a gamester, a politician, a whoremonger, a physician, an evidence, a suborner, an attorney, a traitor, or the like; this is all according to the due course of things: but when I behold a lump of deformity and diseases both in body and mind, smitten with pride, it immediately breaks all the measures of my patience; neither shall

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[55]Swift, op. cit., p. 218.

> I be ever able to comprehend how such an animal and such a vice could tally together.[56]

The semantic tones of this passage indicate a strong degree of intensity of 110, a derived striking power of 2427, and a time duration of 22.1 seconds.

CORRELATION WITH "BEAUTY OF STYLE"

Through using a parallel treatment of the first three voyages, the correlations for "Beauty of Style" are presented in the following tables:

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[56]Swift, op. cit., p. 238.

"UGLY AND NEGATIVE" CONSONANTS

SOUND	EXPECTED PER CENT	OBSERVED PER CENT	PER CENT DECREASE/ INCREASE
/k/	2.70	3.40	+25.9
/b/	1.80	2.10	+17.8
/p/	2.00	2.70	+34.9
/h/	1.81	1.50	-16.7
/g/	.75	1.50	+57.0
/j/	.44	.08	-81.0
/z/	3.00	2.20	-26.6
/t/	7.10	5.70	-18.7
/p/	1.85	2.70	+42.8
/w/	2.08	1.20	-43.1
/y/	.60	.32	-46.6

"DULL AND HEAVY" VOWELS

SOUND	EXPECTED PER CENT	OBSERVED PER CENT	PER CENT DECREASE/ INCREASE
/ɑ̆/	.5	1.9	209.0
/ɛ̆/	3.4	2.0	-50.0
/ɯ̆/ and /ə/	5.3	5.7	7.6

Numbers equal to 1202 phonemic items were observed for the Fourth Voyage. There was a striking difference in this voyage in the consonant range. A total decrease of 3.6 was found for the consonants. The total percentage expected for the consonants was 24.3. The observed percentage was computed as 23.4. The vowel phonemic sounds showed an increase, but not a great increase. The expected occurrence is 9.2, and the observed occurrence is 9.6. A total increase for the vowels is 4.3 per cent. The correlation between Williams' "Beauty of Style" and Robson's The Orchestra of the Language would tend to be strong, because the average intensity for the Fourth

Voyage is 102, which is less intense than the former Voyages. The fall in the "Negative and Ugly" consonant range would tend to correspond with the decline in intensity. It remains to consider all the findings of the Four Voyages and to draw logical conclusions.

Chapter 7

SUMMARY

It is not enough to state that invective carries the deeper tones and the longer duration even though adequate statistical evidence has been given of a sustained intensity of some 100+, averaging out all voyages. It was shown earlier that the intensity was higher for Swift than for Defoe. However, there is still more significant evidence available.

It has been established through work done at the University of Kansas during the summer of 1970 that a program can be written to ascertain the power value of every word in the English language.[57] A random sampling of 4474 words from Webster's Third International indicated that the normal intensity for an English word is 71.3. This figure is obtained from the Robsonian tables with intensity equal to striking power/time duration in fractions of seconds.

In the first test, that between the intensity of the normal random-sample computed value for an English word and the intensity for the verbal statements from the quotations

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[57]Sedlow, Milic, Barnes, Unpublished Program Computed for Project 17, ACLS, Humanities Computation Center, University of Kansas, June 13 - August 6, 1970. See as Appendix H.

used from Gulliver's Travels, the X^2 analysis revealed a table difference of 11.3 on the 1 per cent level, and the computed value was 60.2, a highly significant result.

Now, the next test was to discern what significant difference, if any, would result from distinguishing "wit" from the normal intensity of the English word. The mean intensity value for wit was discovered to be 87.3.[58] The results of the X^2 test indicated, again, a significant difference above the table value of 11.3 on the 1 per cent level. At this point, it is clear that wit and invective, both tools of comedy, have, for each, a significant difference well beyond the normal intensity of the English word(s).

As a final check, it was decided to ascertain whether there was a significant difference between the intensity for wit and the intensity for invective. The intensity for wit, as indicated, was stated as 87.3. The mean intensity for the invective in Swift's Gulliver's Travels is here calculated as 104. Again, a significant difference is found through the X^2 test.

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[58]Sedlow, Milic, Barnes, op. cit. See as Appendix H.

It remains, then, to see whether there are significant differences among the invective utterances used in the different voyages, for each voyage with respect to the others. This determination becomes essential if one is to state with any degree of force as to truth-falsity whether the tone of invective changes among the four voyages.

It can be seen that the Robsonian table indicates higher intensities for Voyages One and Three than for Two and Four. The average intensity for Voyages One and Three is 106.2, for Two and Four only 101.7. Is the difference appreciable?

However, the differential is to be calculated with 71.3 as a base, not 100 per cent, for 71.3 represents the normal intensity. Thus, there is 4.5 x 100/71.3 or 6.5 per cent. This difference is significant on the 5 per cent level, but just barely so, and to be significant on the 5 per cent level is not to be significant enough for the purposes here.

There simply is no way to stretch a 6 per cent difference into real significance. Yet, on the other hand, it is beyond doubt that Voyages One and Three are each collectively greater in intensity than Voyages Two and

Four. It is true that in Voyages One and Three Lemuel is not an Englishman, but in Voyages Two and Four, he is an Englishman.

There is an indictment in each case. The temptation is to assert that Lemuel is not as intense when he is an Englishman as when he is not. It is an interesting psychological point to suggest that when Lemuel is English, he is restrained somewhat from indicting his own people too severely. However, this assertion simply cannot be proven. Whether one uses "we" or "they" does not matter that much with respect to intensity. Yet, the differences do exist, but they do not exist to the point where one can say with any degree of certainty that the emotive tone changes or darkens significantly among the voyages. Thus, the findings must be that among the voyages the tones do not differ markedly, but the invective as distinguished from the normal intensity and the invective as distinguished from wit seem substantially different. How do these findings compare or contrast with those in Williams' "Beauty of Style"?

Invective carries, by definition, more negative and ugly tones or sounds than euphonious or pleasant sounds. Concern with just the consonant itself is

dangerous and uncertain in English, because the vowel in English gives the tone and mood to the verbal utterance. In the four voyages there is a net increase of phonemic combinations for the ugly and negative and unpleasant vowels and consonants over the expected ratios.

Voyage One has an increase of 28 per cent; Voyage Two an increase of 10.5 per cent; Voyage Three an increase of 24 per cent, and Voyage Four but an increase of 1 per cent. Significant differences appear between Voyages One and Three, on the one hand, and Voyages Two and Four, on the other hand. One point is clear: the overall increase is substantial and indicates the difference between the normal word tones indicated by Dewey and those indicated through using an interpretation based on Williams' "Beauty of Style."

When it comes to what appears to be a significant difference between two sets of voyages, a strong note of caution has to be indicated. The weakness in Dewey is that the word list does not take into account the predicted occurrence of each graphic representation of a phoneme for the English language. Therefore, a phonological breakdown, as indicated in Williams' "Beauty of Style" and in Dewey's Relative Frequency of English Speech Sounds still does not

take into account the actual graphic frequency of the appearance of the alphabet letters themselves. Where the predicted frequency of Shannon's work is considered, the increase is lower, and the differences among the voyages are not significant. On the other hand, the weakness of Shannon's work for a work of this kind has limitations in that the same graphic representation of the letters of the alphabet involves variant sounds in combination when the letters, as such, are placed in context within words and sentences.

Williams' thesis supports the Robsonian interpretation in indicating the intensity of invective. With the limitation that must be placed on Williams with regard to his predicted frequency of the occurrence of phonemes, sound-oriented (by definition itself), no effort will be made to claim a significant difference between voyages.

Perhaps the intellectualizing tones of Book IV cause a drop to 1 per cent over the predicted normal phonological tones for words, as indicated in Dewey.

Claude E. Shannon and Warren Weaver, The Mathematical Theory of Communication, (Urbana: The University of Illinois Press, 1964), pp. 1-125.

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APPENDIXES

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APPENDIX C

3

The Orchestra of the Language

TIMBRE IS THE SPECIAL AND DISTINCTIVE QUALITY OF A SOUND.

If a musician hears a bass violin, a bassoon, and a tuba play the same note with the same loudness, he can detect which instrument is making the note. That is what timbre means to a musician. He may call it musical "color." Our sensing of timbre need not be restricted to musical instruments. If differences in pitch and loudness are disregarded, then any sound that enables a person to identify and distinguish the nature of its source possesses a recognizable quality. That quality is timbre.

The quality of sound has been attacked as a special problem by research scientists. It is not a simple one. The acoustic elements of timbres are the pattern or structure of their overtones, the speed with which they build up their tones and intensities, and the speed with which they die down or decay. Large changes in intensity and frequency affect quality. While intensity and frequency are related and modify one another, the effect of their interactions depends on the dimension of time.

Behind the complex configurations of sound quality lie the nature and structure of the material at the source of the sound.

Phonetic timbre is the distinctive quality in the sounds of

them. The first step in this direction is to reduce the complexities of articulation qualities to a number of auditory impressions or casts of the voice upon hearing as though they were a set of physiological colors. From this viewpoint, the writer's point of view, the timbres of language are the *audible* casts of the voice in words such as: the boniness or hardness of the consonant *k* (carries a bony roof-of-the-mouth color); the liquid soft bubbliness of *b* (stamped with the interior moisture of bulbous-shaped lips); the harsh raucousness and the oral roar of the vocal chords and the throatal resonance of *r*; the almost pure, breathlike airiness of *h*; and the minute sharpness in the dental detonation of *t*. Further simplification of these casts of the voice in words is to classify them as phonetic instruments in a complete orchestra of the language whose intelligent use depends on the direction of the writer.

Please turn to Figure 2. Here the sounds of speech have been arranged in the image of a 41-piece orchestra waiting to be organized by the auditory imagination of the writer, the director, and the composer of language.

The illustration shows vowels, diphthongs, semivowels, and consonants arranged in eleven orchestral groups. These musical images will help the writer or speaker to visualize the letters of the alphabet as symbols of timbre and instruments of phonetic intelligence. Just as a symphonic orchestra puts the stringed instruments and the wood winds in the front rows and the percussion devices such as drums, triangles, cymbals back in the rear rows, so the orchestra of the language places the vowels that are tones in the front and the consonants that are noises in the back. Although this arrangement grew out of an analogy with music, it is based on the valid acoustic distinction between a tone and a noise. This auditory distinction leads the writer to look at the alphabet as he must look at it if he intends to use the timbres of speech to develop audio-scriptic intelligence.

The first three groups are tone divisions. They separate the

THE ORCHESTRA OF THE LANGUAGE

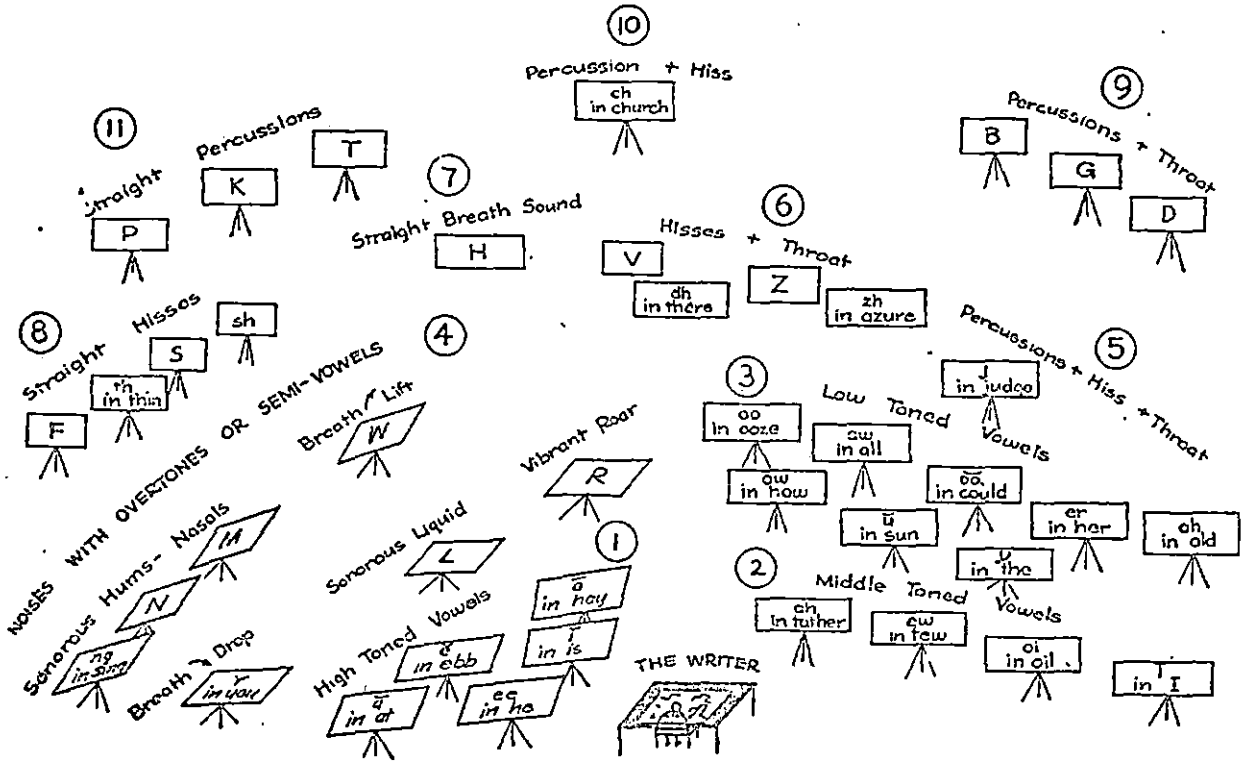


Figure 2

vowels into three tone levels: high, middle, and low. Since the vowels are the most potent creators of tone in language, this scheme prepares the writer to think about vowels and to hear their vibrations as notes in a vowel scale. Later, the vowel scale and its uses in writing will be discussed in detail. At present, the writer should keep one fact in mind. These "tones" are produced in the mouth, not in the throat or the vocal chords. The "high" vowels ee, ĕ, ĭ, etc., are made in the front one of the two chambers that the tongue makes by separating the hollow of the mouth into two resonating rooms. The tongue acts like a wall. The "low" tone vowels such as oo, oh, aw are produced by drawing back and dropping the tongue-wall so that the oral chamber is lengthened, deepened, and enlarged. The strongest overtones of the low-toned vowels come from the rear of the mouth, out of whose depths they carry to our hearing a feeling of lowness, largeness, and darkness. The "middle" vowels are compromises. This group includes the diphthongs *oi* and *ew* that fuse a low and high vowel, and the vowel *ah* whose oral structure lies midway between the high and low vowels.

Let us look again at the illustrated orchestra.

Behind the full-toned vowels in the first three groups appear the partial tones, the transient semivowels in Group 4: *w, y, r, l, m, n, ng*. The last three of these sounds, *m, n, ng*, resonate with vibrations in the nasal cavities that give them a humming quality. The hum of *m*, lower in tone level than *n*, is heard most clearly in words with low-toned vowels such as *hum, room, strum, mum, mumbles, murmur, mom, momentum*. When *m* borders on a low- or middle-tone vowel, its hum color is more powerful than in the high-vowel environment of words such as *maim, member, mammy, mimic, minimize*. The higher vowels break up sharply the low throb in *m*'s resonance and mask its hums. This observation suggests a tendency in many semivowels to sound clearer when they blend with vowels on the same tone level. The vowel sustains the altitude of the transient

tone. Otherwise, hearing is compelled to make too many adjustments in too short a period of time. We see here how delicate these qualities are and how necessary it is to use all the elements of auditory intelligence in a related pattern to make a definite impression on the ear.

The hum-timbre of *n*, higher in tone than *m*, is more impressive in high-voweled words: *keen, kin, pin, tin-pan, Dane, insane, winnow, wind, stain.* If we listen closely to the humming resonance of *ng* in *bang, cling, dung, wrung, ding-dong, clang, gong, whang, singsong,* the denseness of the nasal quality is noticeable. The peculiar, blurred, dense hums of *ng* are the effect of its closely packed overtones. The dense timbre of *ng* is uninfluenced by the tone levels of neighboring vowels.

There is something of the plasticity, softness, and liquidity of the tongue in the timbre of *l* that tinges words such as *lingual, loll, wallow, swill, lolli* in lollipop. When the low-tone level of *l* precedes a vowel and introduces a word, it conveys a sense of uplift in such expressions as *left, lift, lilt, laugh, lady, light, lick, leap, lip.* But the low-tone level of *l* may have an opposite effect when it follows a vowel or terminates a word. Then it can give the impression of a physical letdown, a leveling off, or a long drop: i.e., *lull, fall, tail, stale, spill, fallow, keel, dull, pall, shawl, kill, cool, sprawl.*

These examples should show the writer that the use of phonetic timbre is a creative opportunity, and not a gadgetlike gimmick of mechanical character. Its value is a potential for the writer's imagination, and not a guarantee.

Three of the more powerful semivowels in Group 4 of the illustrated orchestra are *y, r,* and *w.* The low-toned timbre of open, loose-lipped *w* sweeps its upcurve of breath out of the low chordal regions of resonance, and glides into vowels at high speed, and with force. The power and the tubal openness in the swift upswerve of this sound has creative possibilities for the writer. The timbre of *w* may be used to suggest the open-

flowing, the rhythmic, the forceful, or combinations of these qualities. These possibilities are conveyed in *win, wild, water, wings, wobble, waves, wind, wanton, whiff, warble, whistle, swish, swing, sway, willow, wail, will,* and (again with deference to Dizzy Dean), *swang.* The power and the conspicuous quality of *w* can put a definitive pulse into phrases, e.g., *the wishing well, wanton wenches, the Wailing Wall, wishy-washy, winning ways, wild women, werewolf.* The timbre of transient-toned *y,* with its speed and gliding power suddenly emitted from the high tone region in the mouth, strikes the ear with some of the chordal tension of the vowel *ee.* This explosion of high tension may be used to express the assertive, the abrupt, the final, or the swiftly rising impetus in *yield, youth, yank, yell, yip, yap, yes, yeast.* The throatal, low roar of r, full of pharyngeal friction, has a resonance that is reinforced by the sympathetic vibration of the tip or blade of the tongue, near the center of the hard palate; *r* carries its low-toned roughness, power, and its dark throat color into low-toned words such as *strong, storm, harsh, war, rough, burr, hard, rock, hoarse, char, gore, gorge, wrong.* The sense of irritation and power displayed in these words is partly due to the chordal friction and the tremendous intensity in the ear-color of r. Although r is low-toned, its timbre is not destroyed by gliding into high-toned vowels in words such as *leer, rage, rile, liar, cheer, rasp, rant, ram, wretch, bear, rape.* Here its power is evident. Engineering data on the acoustic dimensions of *r* show it to be the most powerful of all nonvowel speech sounds. That is the probable explanation of why the timbre of *r* is not destroyed by running into vowels on quite different tone levels.

The straight percussion sounds that strike the ear like drums appear in the noise section of the orchestra of the language, high up in the last row. They are the breath-exploding consonants *p, k,* and *t.* They do explode. The pentup air pressure suddenly released by the noise of *p* has a lip timbre; *t,* a teeth quality; and *k,* a hard texture that echoes from the bony roof of the

mouth. These are the swiftest sounds of speech, whose time durations are so tiny that the ear has little opportunity to detect tone. The timbre of the percussions in orchestral Group 11 is not influenced by the tones of adjacent vowels. The lip explosiveness of *p* sounds through *nipple, pucker, pop, pout, lip, pulp, flip, pipe.* The sharp, quick, abrupt, dental cast of *t* carries its keen timbre into *taut, meat, tear, cut, tattle, teeth, white, tart, tight, tack;* and its quality of the diminutive and the swift into *tot, trout, teat, tut-tut, titter.* The boniness of the roof of the mouth enters into the articulation of *k* and passes its quality of hardness on with speed and sharpness in *crack, truck, cluck, conk, kick, click, knock, creak, squeak, ack-ack, nick.*

If you try to pronounce *p, k, t* with resonance in the throat, your articulations begin to sound like *b, g, d.* These resonated plosives constitute orchestral Group 9. Their throatal vibrations lengthen the durations of *b, g, d,* and this extra time for hearing permits the ear to perceive more tone than in the snappy, unvoiced percussives, *p, k, t.* The timbre of *b* is impressed with a sense of the softness of bulbous-shaped lips. It has the quality of a relatively slow explosion moving softly, amorphously, with low tone through a wet bag. Words such as *lob, blimp, bubble, bobble, blab, blubber, sob, babble, boob, slob, burp, bib, bulb, babe* communicate a sense of full-blown moisture, or slowness, or lack of structure, or a combination of these characteristics. The source of *g* is about five times as far back from the surface of the front teeth as its relative *k.* The timbre of *g* is an explosive gutturalness shot through with power, duration, and indefiniteness in tone. When *g* occurs twice in a word it gives the effect of a guttural noise bouncing up and down like a stammering in the throat in *goggles, gag, groggy, gargle, gig, agog, geegaw.* These words are double acoustic images of the guttural colored emissions of breath that the back of the tongue explodes in the glottal regions. The sudden tongue-dropped, open-mouthed throatiness of *g* casts its timbre like a shadow of the

voice upon the expression of words like *gawk, gasp, gook, gape.*

The hissing consonants in orchestral Group 3 have the frictional quality of breath blowing tiny, acrial bubbles over the lips and tongue and through the teeth. They are *th, sh, f,* and *s.* Some of these sounds are long-durational and all of them have a soft texture, except s, which carries the sharp imprint of the teeth. Their timbre of fricative breath, beating in the ear like an atomized gas, pulses through words such as *fast, swift, slash, swish, hiss, fizzle, fuss, sift, soufflé, shuffle, scuffle.* The longer time duration of steady breath friction reveals its dimension in *stiff, staff, suffer, shaft, smooth, stuff.* Notice how the soft-lipped, air-rippled quality of *f* enters expressions such as *fluff, ruffle, foam, muff,* and how the carnivorous teeth emotionally color the breath with the sharpness and snap of *s* in *hiss, snip, sizzle, cuss, slash, sik'em.*

These examples can be multiplied to show that the timbre groups in the illustrated orchestra of the language will aid the writer to select more powerful, more sensuous, and phonetically more intelligent words. But the writer might remember this fact. The timbre of consonants and semivowels was usually considered in conjunction with the other dimensions of audio intelligence: time, tone, power. Although timbre is a tool for making language decisive, its impressions on hearing are limited. Sharp contours of timbre depend on all the dimensions of sound to communicate their full meaning. So does audio-scriptic intelligence.

We can draw these conclusions: The greater the number of sound dimensions the writer can control, the greater his potential for creating sound images rich with phonetic information. The greater the concentration of auditory signals throughout a flow of words written to produce a clear auditory effect, the greater the probability that the intended effect will be heard. Concentration is important. The reason for its importance is the weak energy of conversational speech.

The measurable energy region of audio-scriptic intelligence lies between a whisper and loud conversational speech. Decibel measurements at the source of the sound waves reveal that the power in ordinary speech has approximately one hundred times the power of a whisper. This range covers the vocalized auditory impressions or "ear values" of words seen by the eye when reading words on a printed page and applies to most of the dramatic speech we hear from the legitimate stage, radio, video, and motion pictures. See Figure 3.

The energy level of normal conversational speech is the standard for all the calculations of the ear values of words that appear in this book. "Normal" is an approximate 60-decibel level of heard speech. Consideration was given to the auditory impressions of phonemes when whispered and spoken loudly. All the oral memories in our reading originated from the energy levels of conversational speech. When a dramatist or any other writer reads his script aloud to himself, he tries to speak naturally. To do this he must maintain the loudness level of ordinary conversation. One of the miracles of human hearing and speech is our ability to hear the loudness of our own talk approximately as others hear it. These are the considerations for taking the energy level of conversational speech as the standard for estimating audio-scriptic intelligence.

When we speak we slur the sounds; when we read, we skip and slur them. The experienced copywriter knows he cannot write the same way for radio and video as he does for the printed page. So does the playwriter. The rhythms of the words, the pausing and timing of the phrases must be written to be spoken by an actor. The songwriter must choose words that bring out the resonance in the singing voice, that permit the holding of pitch, the timing of notes, the control of breathing, that accent the measures and above all that tell the stories in the dynamic rhythms of the music. These requirements and the problems they pose for the writer are involved with the limited amount of

Comparative powers (in terms of pressure, dynes per cm^2) of Conversational Speech, Loud Speech, the Singing Voice, and a 75-piece orchestra.
A whisper has roughly ~~1000~~ the power of Conversational Speech.

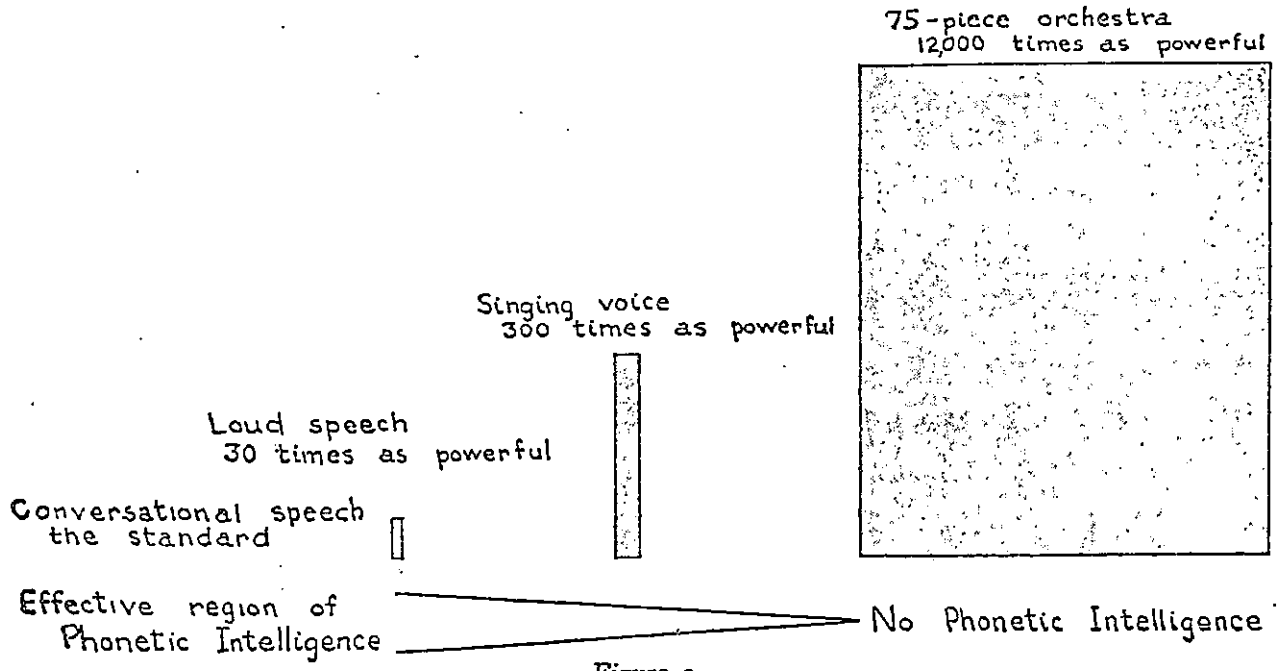


Figure 3

energy in speech. This ever-present energy condition is broadly but concisely presented in Figure 3. In considering this table, the writer should remember that just as the color of flames changes with temperature, so the qualities and properties of all things, sounds included, are radically affected by their inherent energy.

It will be seen, from the point of view of a table of sheer power, how tiny and ineffective conversation appears (see Figure 3) when thrown against the voluminous tones of the orchestra, the chordal pulse of song, or a powerful burst of speech in a staged play. Yet it is the sensitivity, expressiveness, and emotional clarity of the writing that is the foundation on which the writer of song must build his composition and the director of plays for the theater must produce his show. The actor's and the stage director's drive toward a sensationally effective performance that will endure with time depends on the quality of the manuscript. Stagecraft alone will not suffice. History shows the immortality of the world's greatest plays grew from their concepts and the beauty of their language, not the histrionic performance. It is the writer's responsibility and his opportunity to create meaning and emotion through dialogue vibrating with clearly audible and highly intelligible sounds. He cannot afford to overlook any chance to charge his language with auditory power and sensuous feeling, because there lie the circuits and feedbacks of the mind's ear. Phonetic signals have, up to now, been neglected. Their potential effectiveness is yet to be developed. Their ramified connections with the mind's eye, logic, and emotional networks can yield more power to the imaginative writer and the word technician.

APPENDIX D

TABLE 1 *

SUMMARY OF PHONETIC VALUES WITH DIACRITICAL MARKINGS

Phonetic Element	Relative Striking Power Value	Relative Mean Time in Seconds	Subscript 1 is prevowel, subscript 2 postvowel
ī *in* pine, sigh, my	30	0.22 Sec.	
oi *in* oil, toy	30	.22	
aw *in* all, saw, pause	29	.17	
ah *in* father, embalm	28	.17	
ă *in* cat	28	.17	
oh *in* old, moan, sew	28	.17	
ā *in* fame, rain, pay	28	.22	
ew *in* few, you, muse	28	.17	
ŭ *in* sun, won	27	.12	
ee *in* see, tea, field	26	.17	
ĕ *in* ebb	25	.12	
ow *in* howl, bough	24	.22	
ĭ *in* is	24	.12	
er *in* her, fur, world	23	.17	
oo *in* ooze, tune, blue	20	.17	
o͝o *in* book, could, put	19	.12	
ə *in* the	15	.07	
r	8	.07	
l	5	.07	
w	5	.07	
ch *in* church, witch	5	ch_1 .07	ch_2 0.17
ng *in* sing	4	.14	
sh *in* show	4	.12	
y *in* you	4	.07	
n	3	n_1 .07	n_2 .12

* This table sums up numerically all the phonetic values in this book. Because of its economy and comprehensiveness it will be the table most frequently used. Part I of this book can be considered the theory, the explanation, and the preparation to use the data of this table.

TABLE 1—Continued

Phonetic Element	Relative Striking Power Value	Relative Mean Time in Seconds	Subscript 1 is prevowel, subscript 2 postvowel
m	3	m_1 .12	m_2 .14
j *in judge, George*	3	.17	
zh *in pleasure, azure*	3	zh_1 .07	zh_2 .12
dh *in then*	3	dh_1 .07	dh_2 .12
z	3	z_1 .12	z_2 .14
g	3	.12	
k	3	k_1 .02	k_2 .07
t	3	t_1 .02	t_2 .07
f	2	.12	
v	2	v_1 .07	v_2 .12
d	2	.07	
b	2	.12	
p	2	p_1 .02	p_2 .07
s	2	.12	
h	1.5	.07	
th *in thin*	1	.12	

Relative Tone Level of Vowels		Effects of Neighboring Consonants on Vowels	No Effect: h, k, g, ng
oo, oh	2	Low: f, v, p, b, m, l	
o͝o, er	4		
aw, ow, ə, ŭ	6		
ah	8	Middle Low: r, w, th, dh	
ow, oi	10		
ĭ	12		
ă	19	Middle High: h, d, n, z, t	
ĕ	21		
ā	22		
ĭ	24	High: s, ch, sh, zh, y, j	
ee	26		

TABLE 2 *

SUMMARY OF PHONETIC VALUES FOR INTERNATIONAL PHONETIC ALPHABET

Phonetic Element	Relative Striking Power Value	Relative Mean Time in Seconds	Subscript 1 is prevowel Subscript 2 postvowel
aɪ *in* pine	30	0.22	
ɔɪ *in* oil	30	.22	
ɔ *in* all	29	.17	
a *in* father	28	.17	
æ *in* cat	28	.17	
o *in* old	28	.17	
eɪ in fame	28	.22	
ɪu *in* you	28	.17	
ʌ *in* sun	27	.12	
i *in* see	26	.17	
e *in* ebb	25	.12	
av *in* howl	24	.22	
ɪ *in* is	24	.12	
ɵ *in* her	23	.17	
u *in* ooze	20	.17	
v *in* book	19	.12	
ə *in* the	15	.07	
r	8	.07	
l	5	.07	
w	5	.07	
tʃ *in* church	5	$t\int_1$ .07	$t\int_2$ 0.17
ŋ *in* sing	4	.14	
ʃ *in* show	4	.12	
j *in* you	4	.07	
n	3	n_1 .07	n_2 .12

* This table expresses the same data as Table 1, with the International Phonetic Alphabet.

TABLE 2—*Continued*

Phonetic Element	Relative Striking Power Value	Relative Mean Time in Seconds	Subscript 1 is prevowel, subscript 2 postvowel
m	3	m_1 .12	n_2 .14
dʒ *in* judge	3	.17	
ʒ *in* pleasure	3	d_{31} .07	d_{32} .12
ð *in* then	3	$ə_1$ .07	$ə_2$ .12
z	3	z_1 .12	z_2 .14
g	3	.12	
k	3	k_1 .02	k_2 .07
t	3	t_1 .02	t_2 .07
f	2	.12	
v	2	v_1 .07	v_2 .12
d	2	.07	
b	2	.12	
p	2	p_1 .02	p_2 .07
s	2	.12	
h	1.5	.07	
θ *in* thin	1	.12	

Relative Tone Level of Vowels		Effects of Neighboring Consonants on Vowels	No effect: h, k, g, ng
ʊ, ɔ	2	*Low*, f, v, p, b, m, l	
u, o	4		
ɔ, av, ə, ʌ	6		
o	8	*Middle Low*, r, w, θ, ð	
ɪu, ɔɪ	10		
aɪ	12		
æ	19	*Middle High*, d, n, z, t	
e	21		
eɪ	22		
ɪ	24	*High*, s, tʃ, ʃ, j, dʒ, ʒ	
i	26		

APPENDIX E

CHAPTER V

Beauty of Style

Beauty is that which gratifies the eye or the ear independently of other considerations. But since writing (exclusive of good penmanship or good printing) consists of ugly black wriggly figures spread across white pages, it cannot gratify the eye as a beautiful image. Accordingly, writing which is beautiful must symbolize sounds gratifying to the ear. In this sense, therefore, we shall discuss beauty in style. It means beautiful sound, pleasing sound, in writing. Moreover, it ought to involve, and it shall involve in our discussion, fitness of sound to sense.

In the following pages we shall discuss beauty under three heads: beauty of pure sounds, beauty of patterned sounds, and beauty of rhythm.

1. PURE SOUNDS. In some way, and for some reason, a few sounds have come to please, and a few to displease, most English-speaking people, irrespective of meaning or context.

a. *Beautiful Sounds and Ugly Sounds.* Among the vowels, *a* as in *arm*, *o* as in *ode*, *oo* as in *moon*, and the two *u* sounds in *tuneful* are the most pleasing. Close behind come *a* as in *ale*, *e* as in *be*, and *i* as in *white* and *ill*. Positively displeasing are the *aw* sound in *all*, *ou* (or *ow*) as in *out*, *u* as in *up*, *a* as in *fat*, and perhaps *e* as in *well*. *Oi* seems displeasing sounded alone or in certain combinations; but words like *voice* and *loyal* are not ugly.

The consonants may probably be arranged something like this in descending order:

Beautiful: *l, m, n, r, v, s, d.*
Negative: *t, f, w, y.*
Ugly: *k, b, p, h, g, j, z.*

This order is only approximate, it would differ with different individuals. But in a list made out by a score of people, the first half-a-dozen sounds here given would probably appear first in one order or another on all lists. An Italian musician pointing out the beauty of the English language gave as an example of perfect beauty the words "cellar door"; Poe thought *v* was the most beautiful letter, and he said that the saddest words in the language were "no more." In his famous poem he used with tremendous effect the word "nevermore." In all the phrases quoted, the beautiful *l's, m's, n's, r's,* and one *s,* together with the long *o's,* occur again and again.

S and *d,* however, are problems. They seem to be beautiful when they occur alone, but are ugly when prominently repeated in successive words. Likewise all the negative letters and their partners (mentioned below) become ugly if too much repeated. Indeed, a sentence in which the number of consonants is disproportionately large is rough, no matter what the consonants may be:

> Midst thickest mists and stiffest frosts,
> With strongest fists and stoutest boasts,
> He thrusts his fists against the posts,
> And still insists he sees the ghosts.

Moreover, some consonants sound so much alike that a reader must be careful to pronounce them very distinctly when he finds one of them at the end of a word, and another at the beginning of the next word. Such pairs make unpleasant reading. They are *b* and *p; d* and *t; f* and *v; g* and *k; m* and *n; s* and *z.* To be added to the list is any consonant repeated from the end of one word to the beginning of the next word, as "deep places." Some ugly sentences showing the *liaison* (as it is called) of pairs of consonants follow:

The big king kicked Tim.

A plain man must drink good tea.

Hop up behind his sister.

Pop broke glass on market days.

The next few quotations illustrate the beautiful and the ugly effects produced by certain letters:

> Fat black bucks in a barrel-house room[1]

This is an ugly-sounding line. Notice the flat *a's* and the flat *u*, the *b's*, the *k's*, the *h*, the *f*, the ugly *ou* in *house*. *Room* is the only beautiful word in the line.

This next is from that now-neglected master of word-music, Tennyson:

> O, hark, O, hear! how thin and clear,
> And thinner, clearer, farther going!
> O sweet and far from cliff and scar,
> The horns of Elfland faintly blowing!
> Blow, let us hear the purple glens replying;
> Blow, bugle; answer, echoes, dying, dying, dying.

Notice how the long *o's*, the *i's*, and the *n's*, *l's*, and *r's* echo and reëcho through the lines; and how every ugly sound (like *h*, *k*, *g*, and *p*) is immediately modulated by a following beautiful sound. The single exception is "how."

Shakespeare's early and poor play, the *Comedy of Errors*, has lines such as these:

> Back, slave, or I will break thy pate across.
>
> Hence, prating peasant, and fetch thy master home.
>
> If I last in this service, you must case me in leather.
>
> It would make a man as mad as a buck to be so bought and sold.

Turning to prose, we find this in Kipling: "shrimp-pink prisoners of war bathing." Not quite so bad is, "The shutter of the room next mine was attacked, flung back." Carlyle writes, "Thus your Actual Aristocracy have got discriminated into Two Classes," and, "The Ant lays-up Accumulation of Capital, and has, for aught I know, a Bank of Antland." Here is a sentence from Galsworthy, with the

[1] In the original poem, the word is "wine-barrel" instead of "barrel-house"; the latter word is the first in the next line.

purely unpleasant sounds capitalized, and the unpleasant repetitions or *liaisons* italicized:

HiS *KicKS* And CrowS And sPlAsHingS *HAd the* Joy of a gnAt'S dAnce or a JAcKdAw's GAmBols.

But it should be remembered that the sense or the feeling of a passage may often demand ugly sounds. The sentence just quoted from Galsworthy (in which the bathing of an infant is described) would be absurd if it were dignified and beautiful; and the line from Lindsay's *Congo* ("Fat black bucks," etc.) is purposely ugly because the author tries to create an unpleasant reaction in the reader. The following from Tennyson's *Morte d'Arthur* is likewise purposely harsh for its onomatopœic effect:

> Dry clashed his harness in the icy caves
> And barren chasms, and all to left and right
> The bare black cliff clanged round him, as he based
> His feet on juts of slippery crag that rang
> Sharp-smitten with the dint of armed heels.

b. *Feeling and Letter-sounds.* Not only are certain sounds beautiful or ugly in themselves, but certain sounds convey certain feelings.

O, especially long *o*, gives sonorousness, solemnity, power, and often mournfulness to words.

I, especially long *i*, gives a feeling of quick brightness, delight, and happiness.

A as in *fate* often has about it a feeling of lazy deliberation, or stateliness, or undeviating straightness, or weight.

Long *e* usually implies feeling keen rather than powerful.

Long *u* and long *oo* make a tuneful, crooning sound that is soothing, smooth, and curative.

Short *a*, *e*, and *u* are dull words, heavy, flat, platitudinous, and sometimes depressing. They occur in words like *wet blanket, mud, smut, fat, nap,* and *death.*

The Biblical sentence, "Arise, shine, for the light has come, and the glory of the Lord is upon thee," is a perfect example of joyous long *i's* which grow into the more solemn emotion of the long

o's, which in turn end with a hint of excited feeling in the long *e*.

"Give ye ear and hear my voice; hearken and hear my speech." This, with its long *e's*, almost screams at its reader. The next verse, however, at once mounts into true solemnity: "Doth the plowman plow all day to sow? Doth he open and break the clods of his ground?"

Some consonants have definite emotional connotations, or excite definite feelings or ideas. The long-drawn *m* and *n*, for example, bring about in the sound-progression a momentary suspension which is lulling and soothing. Tennyson uses these letters, together with long *o*, most skillfully in "The Lotos-Eaters":

> "Courage!" he said, and pointed toward the land,
> "This mounting wave will roll us shoreward soon."
> In the afternoon they came unto a land
> In which it seemed always afternoon.
> All round the coast the languid air did swoon,
> Breathing like one that hath a weary dream.
> Full-faced above the valley stood the moon;
> And, like a downward smoke, the slender stream
> Along the cliff to fall and pause and fall did seem.

R with long vowels creates a calm, clear music, as in this stanza from "The Lady of Shalott":

> Only reapers reaping early
> In among the bearded barley,
> Heard a song that echoed cheerly
> From the river winding clearly,
> Down to towered Camelot;
> And by the moon the reaper weary,
> Piling sheaves in uplands airy,
> Listening, whispers, " 'Tis the fairy
> Lady of Shalott."

But with a profusion of other consonants, *r* becomes harsh and rasping—as in the lines from *Morte d'Arthur* already quoted.

L is liquid, light, translucent; it is pale like twilight; it is soft like the glow of a pearl. In his descriptions of the sea, Conrad invariably calls on this letter to assist him, as in this:

I saw it suddenly flicker and stream out on the flagstaff. The Red Ensign! In the pellucid, colorless atmosphere of that southern land, the livid islets, the sea of pale, glassy blue under the pale, glassy sky of that cold sunrise, it was, as far as the eye could reach, the only spot of ardent color.[2]

S is a swift and agile letter if it is not bound up with long vowels. Thus, Tennyson's "So strode he back slow to the wounded king," is slow and deliberate because of the long *o's* which impede the flow of the *s's*. But Pope's lines,

> Not so when swift Camilla scours the plain,
> Flies o'er the unbending corn or skims along the main.

show the *s* in its true nature. The old tongue-twister, "She sells sea-shells by the seashore," is all the more difficult to say because the *s's* invite—indeed, almost compel—hasty utterance. If the line were slowed up by long *o's*, we should not be tempted to say it fast, and should find it no more difficult than Tennyson's line quoted above. Thus: "Sol soaks so-and-so's in soapsuds."

B, *t*, and *p* give an impression of abruptness—of a chopped-off sound, an idea bitten through, a sentence pat and proper.

G, *h*, and *j* are ordinarily regarded as rough, savage letters with none of the refinement of *l*, *m*, *n*, and *r*. A look into a thesaurus shows all these words with *g's* and *h's* as synonyms of *horrible: ugly, homely, misshapen, shapeless, hard, hard-visaged, haggard, grim, ghastly, ghostly, gristly, gruesome, ungainly, gross, hulking, horrid,* and *hideous.*

Poe's poem, "The Bells," is a deliberate exercise in letter-sounds and letter-feelings which the reader may study with profit.

In the following experiment, notice how the sense and the feeling change with the changing of dominant letters:

With *o:* A bullet moaned slowly across the hollow.
With *i:* A bullet trilled swiftly from cliff to cliff.
With *e:* A bullet screeched fiercely, deep in the ravine.
With *a:* A bullet wailed past the face of the palisade.
With *n:* A bullet sang along the canyon between pinnacles of stone.

[2] From *A Personal Record*, by Joseph Conrad, copyright, 1912, by Doubleday, Doran and Company, Inc. Reprinted by permission.

With *r:* A bullet from far off rang its clarion through the gorge.
With *l:* A bullet leapt lightly across the valley.
With *s:* A bullet sped swiftly from side to side of the abyss.
With *b, f, p,* and *t:* A bullet cleft the space between lip and lip of the gulf.
With *g, h,* and *j:* A bullet hurtled savagely from jagged crag to crag.

So far, we have dealt with pure sounds as units, irrespective of their relation to the sentence as a whole. In the next section, we shall examine them as they appear in the sentence itself.

2. PATTERNED SOUNDS. The essence of pattern is repeat. A single beat of a tom-tom is not a pattern, but a series of similar beats is; one soldier in uniform is not a pattern, but a whole squadron is; one row of corn is not a pattern, but a field of rows is.

These primitive types of patterns, however, consisting as they do of mere repeats, soon grow monotonous to the eye or ear. To be permanently gratifying, therefore, a pattern must have variety, change, relief from sameness; and yet all the while it must maintain its identity as a system of repeats. Good sentences have this variety within sound-patterns. One sound repeats itself over and over, and yet just before it becomes monotonous, this sound gives way to another. Then, after a bit, the first sound may be taken up again, carried on, blended with the second, made a part of the special pattern formed by the second, and eventually wrought into a harmony.

Within the sentence, only those sounds which occur in accented syllables and in important words form a part of the sound-pattern. But the very fact of repetition gives importance to sounds which would be ignored if they were not repeated. Any sound, therefore, repeated several times becomes a part of the sound-pattern almost independently of its accentuation or sense-importance.

a. *Vowel-Patterns.* A sentence already quoted is a good example of simple vowel-pattern:

Arise, shine, for thy light has come,
..i.....i.....i..i.....u...
and the glory of the Lord is upon thee.
.....o.....o.....o.....e

Expressed symbolically, according to the rhythmical balance of the sentence, the pattern looks like this:

i i i i u
o o o e

In this next, as in the preceding, only accented vowels are noted:

Or ever the silver cord be loosed,
...e.....i.....aw.....u.....

or the golden bowl be broken,
.....o.....o.....o....

or the pitcher be broken at the fountain,
.....i.....o.....ow.....

or the wheel broken at the cistern.
.....e....o.....i.....

The pattern of it may be expressed thus:

e i aw u
o o o
i o ow
e o i

Observe the beautiful weaving back and forth of the dominating *o* (with the kindred open *aw* and *ow*) and the less emphatic *e's* that gradually reach a climax in *wheel;* and observe the minor *i* sound reappearing in all the components but one.

One more example from the Bible:

Intreat me not to leave thee,
....e....e..o.....e.....e.

or to return from following after thee:
.....u....u...o.o.....a.....e..

for whither thou goest, I will go;
.....i.....ow...o... i...i...o..

and where thou lodgest, I will lodge.
.....a....ow.o..... i...i...o....

This, with its open *ow* and *o* sounds, is approximately as follows:

e e o e e
u u o o a e
i ow o — i i o
a ow o — i i o

The entire passage is a pattern of three elements—*e, o,* and *i*—with *u* and *a* as discords. Notice, moreover, the additional pattern in the last two elements of the passage.

Here is a sentence from a modern writer, Joseph Conrad:

He is the war-lord
..e.....aw..aw

who sends his battalions
..u..e.....a.a....

to the assault of our shores.
u.....a..aw....ow...o...

There may be some questions as to whether the passage is divided correctly; but the interplay of *aw's* and *a's* is obvious. The last element of the sentence forms a perfect conclusion by repeating the two dominant elements, and then shifting subtly to the related open sounds of *ow* and *o*.

One more example will reveal additional complexities of these vowel-patterns:

Oh, moonlit night of Africa,
o.....u..i...i.....a.....

and orchard by those wild sea-banks
.....aw.....i....o....i....e...a...

where once Dido stood.[3]
...a...u.....i.o...u....

Exclusive of alliteration, which can become obvious and tiresome, there is no better way to get music in prose than by the use of vowel-patterns such as those analyzed. Their intricate interweaving, or counterpoint, makes the beauty of language.

[3] From Andrew Lang's *Adventures among Books.* Quoted by W. E. Williams in *Plain Prose,* Longmans, Green and Company, 1929, p. 110.

b. *Consonant-patterns.* It is true that consonants can be molded into patterns quite as complex; but except for a few consonants and a few simple patterns, consonant-patterns have little real effect on the reader. He usually sees them as mere repetitions of a unit without relation and without variety. Furthermore, except with three or four consonants (*m, n, l,* and sometimes *r*), these repetitions become displeasing before they have worked themselves into a notable pattern. About the best a writer can do, therefore, after he has made the simple consonant-patterns, is to be content with repeating consonants only for the psychological effects already mentioned. He should leave most of the business of pattern-making to the vowels.

Some consonants can be worked into pleasing arrangements of repeats. In the stanzas from "The Lady of Shalott" and "The Lotos-Eaters" we have seen how the repetition of *r, m,* and *n* gives real pleasure. And in a passage from Conrad we have seen *l* used pleasingly. Moreover, these repeats are not merely alliterative; they weave at random in and out of the syllables. This next passage of prose, from Kipling, illustrates the musical use of the same four letters. It begins with *l* and *r,* passes on to *m* and *n,* and concludes with *r* once more. (The vowels make a pattern of *o's* and *i's.*)

> The night had closed in rain, and rolling clouds blotted out the lights of the villages in the valley . . . The monkeys sung sorrowfully to each other as they hunted dry roots in the fern-draped trees.

But (omitting these four) consonants can usually be felt as patterned only when they are alliterative. Furthermore, if the alliteration involves more than two or three syllables, it is nearly always distinctly unpleasant to the reader.

> The sentence lacks a proper proportion of parts.
>
> The water washed the watchdog away.
>
> Girls gain their growth less gradually than boys.

All these sentences sound bad.

The best sort of alliteration for prose is that which is an intricate crisscross of sound that is felt rather than intellectually perceived.

Let us see it working out in verse and then in prose. Swinburne, that master of patterned language, writes:

> *Th*ere go *th*e *l*oves *th*at *w*ither,
> *Th*e old *l*oves *w*ith *w*earier *w*ings;
> And *a*ll *d*ead years *d*raw *th*ither,
> And *a*ll *d*isastrous *th*ings.

The pattern is

Th th l th w
Th l w w w
a d d th
a d th

In the following passage from Pater's *Marius the Epicurean,* note how *s* and *m* are the primary alliterative elements, and how alliterations of *l, f,* and *h* weave like three threads in and out of the fundamental pattern:

> So, little by little, they stole upon the heart of their sister. She, meanwhile, bids the lyre to sound for their delight, and the playing is heard: she bids the pipes to move, the choir to sing, and the music and the singing come invisibly, soothing the mind of the listener with sweetest modulation. Yet not even thereby was their malice put to sleep: once more they seek to know what manner of husband she has, and whence that seed. And Psyche, simple overmuch, forgetful of her first story, answers, "My husband comes from a far country, trading for great sums. He is already of middle age, with whitening locks."

In the following highly rhetorical passage from Ruskin, the reader should notice how the first half of the first sentence is dominated by a constantly recurring *w;* how the second half is dominated by couplets or triplets of alliteration (*b, b, b; p, p; l, l, l*); and how the two halves are woven together by the *f* and *k* sounds repeated at intervals throughout the sentence. The next sentence follows the same scheme, with variations. The first half is dominated by *s;* the second half is dominated by groups of other alliterations (*g, g, g; b, b, b, b; r, r, r, r; b, b*); and the two halves are woven together by the *l* sound repeated at intervals throughout the sentence:

> And then you will hear the sudden rush of the awakened wind, and you will see those watch-towers of vapor swept away from their founda-

tions, and waving curtains of opaque rain let down to the valleys, swinging from the burdened clouds in black bending fringes, or pacing in pale columns along the lake-level, grazing its surface into foam as they go. And then, as the sun sinks, you shall see the storm drift for an instant from off the hills, leaving their broad sides smoking and loaded yet with snow-white, torn, steam-like rags of capricious vapor, now gone, now gathered again; while the smouldering sun seeming not far away, but burning like a red-hot ball beside you, and as if you could reach it, plunges through the rushing wind and rolling cloud with headlong fall, as if it meant to rise no more, dyeing all the air about it with blood.

To summarize all this about patterned sounds:

Prominently repeated vowel-sounds (interspersed occasionally with variant vowel-sounds) constitute the easiest, and often the most effective kind of sound patterns.

L, m, n, or *r* prominently repeated make easy and effective sound-patterns.

The other consonants seldom make noticeable or pleasing sound-patterns unless they occur in alliterations. These alliterations themselves are not pleasing unless they occur in the intricate crisscross formations described above.

c. *Rhyme.* One other subject remains to be discussed, though briefly. It is *rhyme.* We may say at once without any hesitation that rhyme has no regular place in prose. It usually looks like an accidental error made by an unskilled writer; and sometimes it looks like cheap sensationalism. Yet once in a while rhyme is effective. It may be onomatopœic, as in Bierce's "a grumble of drums," and in such phrases as "a growling, howling pack of dogs," "a sputtering, stuttering, frightened little boy," "rushing through the bushes," "chattering about matters of no consequence," "lapping at the platter" (approximate rhyme), "wailing in the jail-house," and so on. Or it may sometimes, in this day of advertising and political slogans, make a catchy phrase which will draw attention and perhaps be memorable: "gangsters shooting and looting in the cities," "lovers sighing and crying in the parks," "people wailing and railing against fate," "politicians snug in their offices and smug in their conceit," "portraits of office-seekers staring and glaring from every billboard," "the smart, tart bright young people," and so on.

Up to this point, we have discussed only letter-sounds and word-sounds as units or repeated units. We have not discussed the larger groupings of words, the blocks made up of many different syllables forming complex bursts of sound and related harmoniously to other such groups. Our next section will deal with such sound-clusters.

3. RHYTHM. The problem of prose rhythm has been the subject of some studies in physics, many studies in psychology, and countless studies in rhetoric. But probably no writer has ever been able to satisfy anybody but himself with his analysis of prose rhythm. Accordingly, it will be extraordinary if the following paragraphs seem to the reader at all correct or helpful. The chief virtue that the author would claim for them is that they add another point of view, another method of analysis, to those already known. Through synthesizing the various points of view, through picking up a hint here and following a suggestion there, somebody may sometime come to a real understanding of prose rhythm. Till that time, all suggestions, hints, and points of view of whatever kind will be valuable.

Rhythm in prose is not rhyme; it is not meter (which is a regular succession of alternating accented and unaccented syllables); it is not mere parallel structure (like *I came, I saw, I conquered*); it is not groups of sounds having the same number of syllables; it is not patterns of vowel-sounds and consonant-sounds. Rhythm is like ocean waves breaking on the shore. No two waves are alike; the sounds made by no two waves are alike; and the intervals between no two waves are the same. Yet a rhythm exists in the beating of the surf; and the rhythm changes with changes in the tide and weather.

a. *Rhythm as a Sound Wave.* The essence of rhythm, like that of pattern, is repeat, although the repeated units need not be identical. Moreover, the repeat consists of two elements instead of one. The wave comes in, and it goes out; comes in, goes out; comes in, goes out. Sounds rise and fall; rise and fall; rise and fall. A sentence with rhythm rises to a crest of sound, pauses, and then falls, only to be followed by another such rise and fall, rise and fall.

the sea;
run into yet the sea
All the rivers is not full.

come,
the rivers thither
from whence they return
Unto the place again.

of labor;
are full man cannot
All things utter it.

with seeing,
is not satisfied nor the ear
The eye filled with hearing.

been,
which hath it is that
The thing which shall be;

done,
which is it is that which
And that shall be done.

Notice in the passage just quoted that the rise to the crest and the fall away from it are of about the same length; and that each of the different crests, from beginning of rise to end of fall, is about the same length as each of the others. Contrast the passage with a piece of non-rhythmic prose such as the following. Writing such as this conveys information clearly, but it is not beautiful.

today,
throughout India due to
were reported monsoon storms.
and heavy property damage
Hundreds of deaths

were homeless.
of families
Thousands

over a cliff.
a train was thrown
In southern India

was buried
of fifteen when a house
a wedding party collapsed.
In the United Provinces

reported
Most deaths were caused
by similar
accidents.

We need not follow punctuation (always variable and often arbitrary) in analyzing passages into sound waves. Sometimes several sound waves may occur in a single sentence, as in the Biblical passage already quoted. On the other hand, one sound wave may involve more than one sentence:

We were in an ecstasy. // We were possessed.

The sun was glorious in the sky. // The sky was of a blue unspeakable.

A great deal of steam! // The pudding was out of the copper. A smell like a washing day! // That was the cloth.

b. *Rhythm as Balanced Sound.* So far, we have been speaking of the larger rhythmic unit as a wave. Suppose, now, that we abandon that figure, and speak of it as a balance of sound. As in poetry there are the strophe and antistrophe, the stanza and the refrain, the word and its rhyme, so in prose there are sound-units which cry aloud for other sound-units to complete them. In a word, many a sentence-element demands another balancing sentence-element before the sentence as a whole can be satisfying.

Various forces within one sentence-element may impose the necessity of a corresponding sentence-element for the sake of completion.

Grammatical structure is one of the forces:

Though I wanted to go, . . .

If he speaks to me, . . .

When he was writing this book, . . .

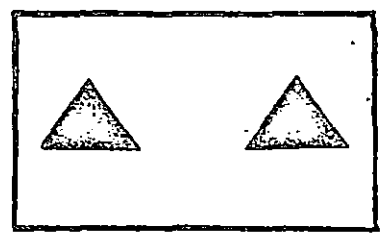


FIG. 1

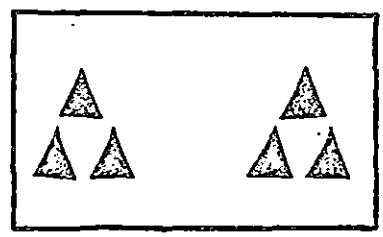


FIG. 2

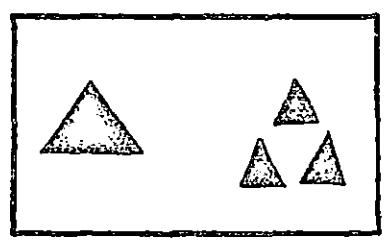


FIG. 3

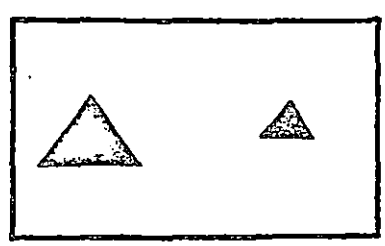


FIG. 4

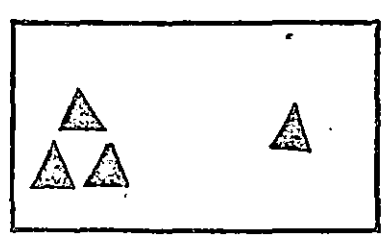


FIG. 5

All these sentence-elements demand by their structure an answering element.

Furthermore, a certain *rhythm in preceding sentences* may point to a like rhythm in subsequent sentences. Thus:

> He tried five or six professions in turn without success. He applied for ordination; but as he applied in scarlet clothes, he was speedily turned out of the episcopal palace. He then became tutor in an opulent family, but soon quitted his situation in consequence of a dispute about play. Then he determined to emigrate to America. . . .

The last sentence cannot possibly remain thus without a completing clause. The rest of the passage has imposed a certain rhythm on the entire paragraph which the last sentence cannot ignore.

c. *Types of Balance.* But to get back to our fundamental point. Rhythm involves a balancing of sound-groups. Now, balance does not mean symmetry. Balance, indeed, does not necessarily require that both elements have the same general structure. The sketches (Figs. 1 and 2) show a balance between identical parts. But such a balance is primitive and crude. The next sketch (Fig. 3) shows a balance made up of one heavy mass and three light masses. This balance is more complex and more interesting than the others. The final sketches (Figs. 4 and 5) show what any artist knows—that well-isolated small objects balance a large object or a group of objects. This is the most interesting of all balance-combinations.

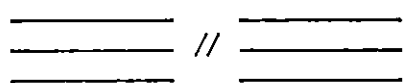
These are the fundamental types of balance. All other types are but variations of these. In sentences, sound-elements of different lengths take the place of the figures in the drawings. Otherwise the principles of balance are the same in both pictorial and literary art. It should be clearly understood, however, that since spatial isolation is not usually possible in writing, it is replaced by weight of meaning. Thus a short sound-element must have a powerful significance before it can balance a long one, or before it can balance several sound-elements.

Examples of the various types of balance follow, along with a graphical analysis of each:

(1) Two sound-elements of the same length balance each other.

Stolen waters are sweet, // but bread eaten in secret is pleasant.
Hatred stirreth up strifes: // but love covereth all sins.
He is my brother,// but I do not love him.

(2) Several sound-elements may balance several other sound-elements of the same length:

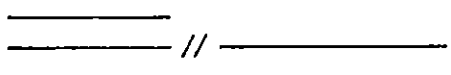


He that hath pity on the poor / lendeth unto the Lord: // and that which he hath given / will He pay him back again.

Then said the princes / and all the people / unto the priests / and unto the prophets: // This man is not worthy to die: / for he hath spoken to us / in the name of the Lord / our God.

Such as it [Milton's character] was when, / on the eve of great events, / he returned from his travels, / in the prime of health and manly beauty, / loaded with literary distinctions, / and glowing with patriotic hopes // —such it continued to be when, / after having experienced every calamity / which is incident to our nature, / old, poor, sightless, and disgraced, / he returned to his hovel / to die.

(3) One long sound-element will balance several short sound-elements. (The long element may come last, as shown, or first.)

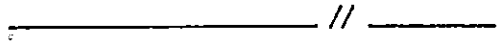


Wrath is cruel, / and anger is outrageous; // but who is able to stand before envy?

What shall we say then to these things? // If God is for us, / who is against us?

Neither blindness, / nor gout, / nor age, / nor penury, / nor domestic afflictions, / nor political disappointments, / nor abuse, / nor proscription, / nor neglect, // had power to disturb his sedate and majestic patience.

(4) Occasionally one short sound-element, weighty in its meaning, will balance a longer element:

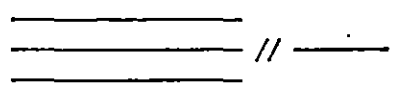


He labored long and faithfully, // but failed.

The first man is of the earth, // earthy.

A philosopher might admire so noble a conception; // but not the crowd.

(5) A short sound-element may balance several other sound-elements of any length—provided the short one expresses a more weighty idea than the others, and (most often) comes at the important end-position of the sentence:



I tell you further, / and this fact you may receive trustfully, / that his sensibility to human affliction and distress / was no less keen / than even his sense for natural beauty // —heartsight deep as eyesight.

We shall attempt to speak of them, / as we have spoken of their antagonists, // with perfect candor.

Be not deceived: // evil communications / corrupt good manners.

Till I come, // give attendance to reading, / to exhortation, / to doctrine.

All these illustrations are sufficient to show the general nature of balance in prose. These general principles, however, are subject to infinite variations. Balanced elements may fall within larger balanced elements; and a whole paragraph may consist of a complex interweaving of balance within balance. The following paragraph from Huxley, for example, is one large rhythmic unit:

If these ideas be destined, / as I believe they are, // to be more and more firmly established / as the world grows older;

if that spirit be fated, / as I believe it is, // to extend itself into all departments of human thought / and to become coextensive with the range of knowledge;

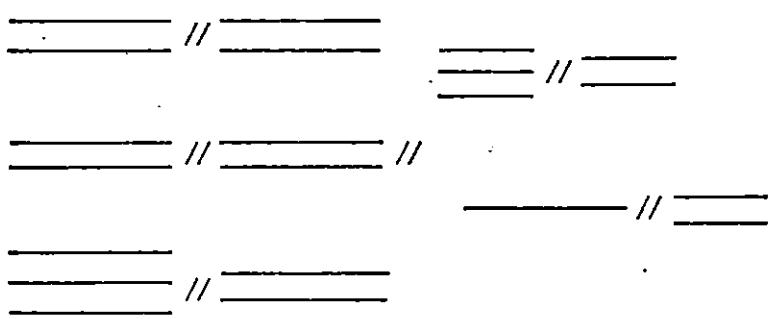
if, as our race approaches its maturity, / it discovers, / as I believe it will, // that there is but one kind of knowledge / and but one method of acquiring it;

//

then we, / who are still children, / may justly feel it our highest duty // to recognize the advisableness / of improving natural knowledge,

and so to aid ourselves and our successors // in our course toward the noble goal / which lies before mankind.

Graphically analyzed, the passage would look like this:



The distinctiveness of a writer's style, the prevailing temper, form, and sound which make him what he is, issues, for the most part, from the rhythms which he adopts. It may be a simple rhythm of parallel and antithetical structures composed of two, four, or six sound elements, as in entire books of the King James Bible. Or it may be the complex symphonies of Ruskin, Newman, and Pater.

d. *Harmony of Rhythm and Idea or Feeling.* But whatever the rhythm they use, good writers fit it to the sense of their work. Simple and plain ideas demand simple and obvious rhythms; involved and difficult ideas demand involved and intricate rhythms. Moreover, letter-sounds must harmonize with the rhythm and with the idea. Certain subjects require certain letter-sounds for their proper transference to the reader; and both subjects and letter-sounds require certain tempos of rhythm. A funeral oration, for example, would not have sprightly *i*-sounds nor would it have a quick and tripping rhythm; instead, it would be filled with long *o*-sounds, and would fall into a slow, stately tempo full of long periods, long sound-elements, and large groupings of well-balanced parts. One would not say in the oration, "He died of angina"; but, "Having long suffered an acute affection of the heart, he at last succumbed to his ailment." (Of course, this second version is wordy; but its rhythm is right—it means right. That a child may understand.) Of a boxing-match, on the other hand, no one would seriously write, "During an encounter notable for its rapidity as well as for its vigor, the present holder of the championship title suc-

ceeded in decisively conquering the challenger"; but one would write, "In a hard, fast match the champion knocked out the challenger."

The whole purpose of rhythm, from the beat of the Zulu's tom-tom to the measures of Shakespeare's blank verse, is to create some sort of *feeling* in the listener. Feeling expresses itself in pattern (for rhythm is but a pattern); and pattern, in turn, rouses feeling. The whole business of a writer, therefore, if he wishes to make his reader feel, is to formulate a rhythm which will be consistent with the ideas conveyed by words and the feeling stimulated by word-sounds.

EXERCISES

1. Pure Sounds.

a. Write two short descriptions on each subject suggested below. Try to fill the first description with pleasant, and the second with unpleasant, sounds.

The traffic passing your home at a certain hour.
A touchdown made by your school, and one made by the opposing school.
A conference with a professor.
Food on the table ready to be eaten.
A crowd at a bathing beach.
An automobile ride through a hilly country.
A modernistic picture you have seen.
A dog sleeping in the sun.
Children playing in the street.
A large person dancing.

b. Experiment with the different emotional effects you can obtain by changing the letter-elements of the sentences below. Alter the meanings slightly whenever you wish.

The old lady was sitting up in bed.
The cat was crying to be admitted.
A bird was singing beautifully from a nearby bush.
He is always complaining about his troubles.
You can always find him reading a book in the library.

APPENDIX F

TABLE 15 RELATIV FREQUENCY OF THE SIMPLE SOUNDS OF ENGLISH ON THE 48 SOUND BASIS OF THE REVISED SCIENTIFIC ALFABET. ARRANGED IN FONETIC ORDER

Sound	%	Occur-rences	Items	Sound	%	Occur-rences	Items
p	2.04	7,620	1,960	a	3.50	13,060	1,445
b	1.81	6,750	1,175	ā	.23	881	141
t	7.13	26,550	4,495	a	.22	820	120
d	4.31	16,050	3,100	ɑ	.02	95	50
k	2.71	10,100	2,700	ä	.47	1,740	306
g	.74	2,760	635	e	3.44	12,800	3,170
f	1.84	6,860	1,135	ē	1.84	6,863	1,317
v	2.28	8,490	910	ı	4.42	16,493	4,151
fh	.37	1,380	210	i	4.11	15,301	1,826
th	3.43	12,780	116	ī	2.12	7,921	876
s	4.55	16,970	4,155	o	2.81	10,450	1,050
z	2.97	11,070	2,050	ō	1.26	4,701	491
sh	.82	3,052	846	u	1.70	6,360	1,115
ʒ	.05	170	51	ū	.63	2,350	440
ch	.52	1,930	350	ə	4.63	17,264	2,937
j	.44	1,630	495	o	.33	1,230	415
m	2.78	10,360	1,840	ō	1.30	4,859	763
n	7.24	26,980	4,375	u	.69	2,570	450
ŋ	.96	3,590	1,035	ū	1.60	5,961	311
l	3.74	13,930	3,290	*Vowel*	*35.32*	*131,719*	*21,374*
r	6.88	25,620	5,420				
w	2.08	7,760	555	ai	1.59	5,923	857
y	.60	2,230	245	oi	.09	345	105
h	1.81	6,755	485	au	.59	2,215	235
Consonant	*62.10*	*231,387*	*41,628*	iu	.02	60	35
Vowel	*35.32*	*131,719*	*21,374*	iū	.29	1,080	290
Difthong	*2.58*	*9,623*	*1,522*	*Difthong*	*2.58*	*9,623*	*1,522*
Total	100.00	372,729	64,524				

the 7,310 assumed: ıī 10%; ıı 30%; ıə 60%
a 2,120 " ē 10%; ə 90%

APPENDIX G

Voyage One

Now in the midst of these intestine disquiets, we are threatened with an invasion from the island of Blefuscu, which is the other great empire of the universe, almost as large and powerful as this of his majesty.

p. 39.

The Treasurer and Admiral insisted that you should be put to the most painful and ignominous death, by setting fire on your house at night, and the General was to attend with twenty thousand men armed with poisoned arrows to shoot you on the face and hands. Some of your servants were to have private orders to strew a poisonous juice on your shirts and sheets, which would soon make you tear your own flesh and die in utmost torture.

pp. 55-56.

Bolgolam, the Admiral, could not preserve his temper, but rising up in fury said, he wondered how the Secretary durst presume to give his opinion for preserving the life of a traitor: that the services you had performed were, by all true reasons of state, the great aggravation of your crimes; that you, who were able to extinguish the fire by discharge of urine in her Majesty's apartment (which he mentioned with horror), might at another time, raise an inundation by the same means, to drown the whole palace; and the same strength which enabled you to bring over the enemy's fleet might serve, upon the first discontent, to carry it back: that he had good reasons to think you were a Big-Endian in your heart; and as treason begins in the heart before it appears in overt acts, so he accused you as a traitor on that account, and therefore insisted you should be put to death.

p. 56.

At last I fixed upon a resolution, for which is probable I may incur some censure, and not unjustly; for I confess I owe the preserving my eyes, and consequently my liberty, to my own great rashness and want of experience: because if I had then known the nature of princes and ministers which I have since observed in many other courts, and their methods of treating criminals less obnoxious than myself, I should with great alacrity and readiness have submitted to so easy a punishment.

pp. 58-59.

We arrived in the Downs on the thirteenth of April, 1702. I had only one misfortune, that the rats on board carried away one of my sheep. I found her bones in a hole, picked clean, from the flesh.

p. 63.

Voyage Two

The mother out of pure indulgence took me up, and put me towards the child, who presently seized me by the middle, and got my head in his mouth, where I roared so loud that the urchin was frightened, and let me drop, and I should infallibly have broke my neck if the mother had not held her apron under me.

p. 74.

The veins and arteries spouted up such a prodigious quantity of blood, and so high in the air, that the great jet d'eau at Versailles was not equal for the time it lasted; and the head when it fell on the scaffold floor, gave such a bounce as made me start, although I was at least an English mile distant.

p. 96.

He was perfectly astonished with the historical account I gave him of our affairs during the last century, protesting it was only an heap of conspiracies, rebellions, murderers, massacres, revolutions, banishments, the very worst effects that avarice, faction, hypocrisy, perfidiousness, cruelty, rage, madness, hatred, envy, lust, malice, and ambition could produce.

p. 106.

You have clearly proved that ignorance, idleness and vice are the proper ingredients for qualifying a legislator. That laws are best explained, interpreted, and applied by those whose interest and abilities lie in perverting, confounding, and eluding them.

p. 107.

I told him I had likewise observed another thing, that when I first got into the ship, and the sailors stood all about me, I thought they were the most contemptible creatures I had ever beheld. For, indeed, while I was in that prince's

country, I could never endure to look in a glass after my eyes had been accustomed to such prodigious objects, because the comparison gave me so despicable a conceit of my self.

p. 119.

Voyage Three

But I had soon reason to repent those foolish words; for that malicious reprobate, having often endeavored in vain to persuade both the captains that I might be thrown into the sea (which they would not yield to after the promise made me, that I should not die), however prevailed so far as to have a punishment inflicted on me, worse in all human appearance than death itself.

p. 124.

Everyone knows how laborious the usual method is of attaining to arts and sciences; whereas by his contrivance the most ignorant person at a reasonable charge, and with a little bodily labour, may write books in philosophy, poetry, politics, law, mathematics and theology, without the least assistance from genius or study.

p. 148.

Three kings protested to me, that in their whole reigns they did never once prefer any person of merit, unless by mistake or treachery of some minister in whom they confided: neither would they do it if they were to live again; and they showed with great strength of reason, that the royal throne would not be supported without corruption, because that positive, confident, restive temper, which virtue infused into man, was a perpetual clog to public business.

p. 162.

Perjury, oppression, subornation, fraud, pandarism, and the like infirmities, were amongst the most excusable arts they had to mention, and for these I gave, as it was reasonable, due allowance. But when some confessed they owed their greatness and wealth to sodomy or incest, others to the prostituting of their own wives and daughters; others to the betraying their country or their prince; some to poisoning, more to the perverting of justice in order to destroy the innocent: I hope I may be pardoned

Voyage One

Quotation One

The heat I had contracted by coming very near the flames and by labouring to quench them, made the wine begin to operate by urine; which I voided in such a quantity, and applied so well to the proper places, that in three minutes the fire was wholly extinguished, and the rest of that noble pile, which had cost many ages in erecting, preserved from destruction.

p. 45.

Quotation Two

But the colonel ordered six of the ringleaders to be seized, and thought no punishment so proper as to deliver them bound into my hands, which some of his soldiers accordingly did, pushing them forwards with the butt-ends of their pikes into my reach, I took them all in my right hand, put five of them into my coat-pocket, and as to the sixth, I made a countenance as if I would eat him alive.

p. 25.

Quotation Three

Golbasto Momaren Eveane Gerdilo Shefin Mully Ully Goe, most mighty Emperor of Lilliput, delight and terror of the universe, whose dominions extend five thousand blustrugs (about twelve miles in circumference), to the extremeties of the globe; monarch of all monarchs, taller than the sons of men; whose feet press down to the center, and whose head strikes against the sun: at whose nod the princes of the earth shake their knees; pleasant as the spring, comfortable as the summer, fruitful as autumn, dreadful as winter.

p. 35.

Quotation Four

Sometimes they determined to starve me, or at least shoot me in the face and hands with poisoned arrows, which would

soon dispatch me: but again they considered the stench of so large a carcase might produce a plague in the metropolis, and probably spread through the whole kingdom.

p. 26.

Quotation Five

Whereas, by a statute made in the reign of his Imperial Majesty Calin Deffar Plune, it is enacted, that whoever shall make water within the precincts of the royal palace shall be liable to the pains and penalties of high treason: notwithstanding, the said Quinbus Flestrin, in open breach of the said law, under colour of extinguishing the fire kindled in the apartment of his Majesty's most dear imperial consort, did maliciously, traitorously, and devilishly, by discharge of his urine, put out the said fire kindled in the said apartment, lying and being within the statute in that case provided, etc., against the duty, etc.

p. 107.

Voyage Two

Quotation One

Then turning to his first minister, who waited behind him with a white staff, near as tall as the main-mast of the Royal Sovereign, he observed how contemptible a thing was human grandeur, which could be mimicked by such diminutive insects as I: And yet said he, I dare engage, those creatures have their titles and distinctions of honor, they contrive little nests and burrows that they call houses and cities; they make a figure in dress and equipage; they love, they fight, they dispute, they cheat, they betray.

p. 86.

Quotation Two

But I could see distinctly the limbs of these vermix with my naked eye, much better than those of an European louse through a microscope, and their snouts with which they rooted like swine.

p. 90.

Quotation Three

When the frog was got in, it hopped at once half the length of the boat, and then over my head, backwards and forwards, daubing my face and clothes with its odious slime. The largest of its features made it appear the most deformed animal that can be conceived.

p. 92.

Quotation Four

But, by what I have gathered from your own relation, and the answers I have with much pains wringed and extorted from you, I cannot but conclude the bulk of your natives to be the most pernicious race of little odious vermin that nature ever suffered to crawl upon the surface of the earth.

p. 107.

Quotation Five

The Kingdom is much pestered with flies in summer, and these odious insects, each of them as big as a Dunstable lark, hardly gave me any rest while I sat at dinner, with their continual humming and buzzing about my ears.

p. 88.

Voyage Three

Quotation One

It is allowed that senates and great councils are often troubled with redundant, ebullient, and other peccant humours, with many diseases of the head, and more of the heart; with strong conculsions, with grievous contractions of the nerves and sinews in both hands, but especially the right; with spleen, flatus, vertigos and deliriums; with scrofulous tumours full of foetid purulent matter; with our frothy ructations, with canine appetites and crudeness of digestion, besides many other needless to mention.

p. 152.

Quotation Two

Again, because it is a general complaint that the favorites of the princes are troubled with short and weak memories, the same doctor proposed, that whoever attended a first minister, after having told his business with the utmost brevity, and in the plainest words, should at his departure give the said minister a tweak by the nose, or a kick in the belly, or tread on his corns, or lug him thrice by both ears, or run a pin into his breach, or pinch his arm black and blue, to prevent forgetfulness: and at every levee day repeat the same operation till the business were done or absolutely refused.

p. 153.

Quotation Three

I told him, that in the kingdom of Tribnia, by the natives called Langden, where I had long sojourned, the bulk of the people consisted wholly of discoverers, witnesses, informers, accusers, prosecutors, evidences, swearers, together with their several subservient and subaltern instruments, all under the colours, the conduct, and pay of ministers and their deputies.

p. 155.

Quotation Four

For instance, they can decipher a close-stool to signify a privy-council, a flock of geese a senate, a lame dog an invader, a codshed a_____, the plague a standing army, a buzzard a prime minister, the gout a high priest, a gibbet a secretary of state, a chamber pot a committee of gradees, a sieve a court lady, a broom a revolution, a mousetrap an employment, a bottomless pit the treasury, a sink a court, a cap and bells a favority, a broken reed a court of justice, an empty tun a general, a running sore the administration.

p. 155.

Quotation Five

I found how the world had been misled by prostitute writers, to ascribe the greatest exploits in war to cowards, the wisest counsel to fools, sincerity to flatterers, Roman virtue to betrayers of their country, piety to atheists, chastity to sodomites, truth to informers. How many innocent and excellent persons had been condemned to death or banishment, by the practising of great ministers upon the corruption of judges, and the malice of factions. How many villains had been exalted to the highest places of trust, power, dignity, and profit: how great a share in the motion of events of courts, councils, and senates might be challenged by bawds, whores, pimps, parasites, and buffoons: how low an opinion I had of human wisdom and integrity, when I was truly informed of the springs and motives of great enterprises and revolutions in the world, and of the contemptible accidents to which they owed their success.

p. 161.

Voyage Four

Quotation One

Some were undone by lawsuits; others spent all they had in drinking, whoring, and gaming; others fled for treason; many for murder, theft, poisoning, robbery, perjury, forgery, coining false money, for committing rapes or sodomy, for flying from their colours, or deserting to the enemy, and most of them had broken prison; none of these durst return to their native countries for fear of being hanged, or of starving in a jail; and therefore were under a necessity of seeking a livelihood in other places.

p. 203.

Quotation Two

I could not forbear shaking my head and smiling a little at his ignorance. And being no stranger to the art of war, I gave him a description of cannons, culverins, muskets, carabines, pistols, bullets, powder, swords, bayonets, battles, sieges, retreats, attacks, undermines, countermines, bombardments, sea-fights; ships sunk with a thousand men, twenty thousand killed on each side; dying groans, limbs flying in the air, smoke, noise, confusion, trampling to death under horses feet; flight, pursuit, victory, fields strewed with carcases left for food to dogs, and wolves, and birds of prey; plundering, stripping, ravishing, burning, and destroying.

p. 218.

Quotation Three

Hence, it follows of necessity that vast numbers of our people are compelled to seek their livelihood by begging, robbing, stealing, cheating, pimping, forswearing, flattering, subborning, forging, gaming, lying, fawning, hectoring, voting, scribbling, stargazing, poisoning, whoring, canting, libelling, free-thinking, and the like occupations: every one of which terms, I was at much pains to make him understand.

p. 203.

Quotation Four

The question to be debated was, whether the yahoos should be exterminated from the face of the earth. One of the members for the affirmative offered several arguments of great strength and weight, alleging, that as the yahoos were the most filthy, noisome, and deformed animal which nature ever produced, so they were the most restive and indocible, mischievous, and malicious.

p. 218.

Quotation Five

I am not in the least provoked at the sight of a lawyer, a pickpocket, a colonel, a fool, a lord, a gamester, a politician, a whoremonger, a physician, an evidence, a suborner, an attorney, a traitor, or the like; this is all according to the due course of things: but when I behold a lump of eformity and diseases both in body and mind, smitten with pride, it immediately breaks all the measures of my patience; neither shall I be ever able to comprehend how such an animal and such a vice could tally together.

p. 238.

APPENDIX H

The examples of wit used were chosen from Addison, Johnson, Macauley, Fielding, Gay, and Steele. Three hundred quotations were used and each word in the entire passage was given value as determined through application of the Robsonian theory as modified for the computer. The modification resulted in a more sophisticated table of vowels and consonants of striking power. Taken into account were the variant spellings giving the same sound combinations, an area where Robson was adequate within a 3 per cent accuracy. As a result of the modification, it is postulated that the computer program for the Robsonian table of vowels and consonants as to striking power, and duration is accurate to 1.7 per cent.

Further, it is also established, by a program for the Pearson Correlation Test, that the program itself has high validity, one of .93 or 93 per cent. In order to establish the correlations, the 4474 words scored by the computer were also scored by hand.